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State Roles and Responsibilities in the National Flood Insurance Program

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American Institutes for Research

October 2006

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Prepared as part of the 2001-2006
Evaluation of the National Flood Insurance Program

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Marc Shapiro, and Kristen Y. Grill**

American Institutes for Research
1000 Thomas Jefferson St., NW
Washington, D.C. 20007

September 2006

EVALUATION OF THE NATIONAL FLOOD INSURANCE PROGRAM

This Evaluation is composed of a series of reports assessing questions identified and prioritized by a steering committee about the National Flood Insurance Program. The reports of the Evaluation will be posted on the FEMA website as they are finalized. The website URL is <http://www.fema.gov/business/nfip/nfipeval.shtm>. The reports in the Evaluation are:

*The Evaluation of the National Flood Insurance Program – Final Report
American Institutes for Research and NFIP Evaluation Working Group*

Assessing the Adequacy of the National Flood Insurance Program's 1 Percent Flood Standard. Galloway, Baecher, Plasencia, Coulton, Louthain, and Bagha, Water Policy Collaborative, University of Maryland.

Assessing the National Flood Insurance Program's Actuarial Soundness. Bingham, Charron, Kirschner, Messick, and Sabade Deloitte Consulting.

Costs and Consequences of Flooding and the Impact of the National Flood Insurance Program. Sarmiento and Miller, Pacific Institute of Research and Evaluation.

Developmental and Environmental Impacts of the National Flood Insurance Program: A Review of Literature. Rosenbaum, American Institutes for Research.

The Developmental and Environmental Impact of the National Flood Insurance Program: A Summary Research Report. Rosenbaum and Bouleware, American Institutes for Research.

An Evaluation of Compliance with the National Flood Insurance Program Part A: Achieving Community Compliance. Monday, Grill, Esformes, Eng, and Kinney, and Shapiro, American Institutes for Research.

An Evaluation of Compliance with the National Flood Insurance Program Part B: Are Minimum Building Requirements Being Met? Mathis and Nicholson, Dewberry.

Evaluation of the National Flood Insurance Program's Building Standards. Jones, Coulbourne, Marshall, and Rogers, Christopher Jones and Associates.

Managing Future Development Conditions in the National Flood Insurance Program. Blais, Nguyen, Tate, Dogan, Petrow, ABSG Consulting; and Mifflin and Jones.

The National Flood Insurance Program's Environmental Reviews: An Assessment of FEMA's Implementation of NEPA and Executive Order 11988. Rosenbaum, American Institutes for Research.

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The National Flood Insurance Program's Market Penetration Rate: Estimates and Policy Implications. Dixon, Clancy, Seabury, and Overton, RAND Corporation.

Performance Assessment and Evaluation Measures for Periodic Use by the National Flood Insurance Program. Miller, Langston, and Nelkin, Pacific Institute of Research and Evaluation.

State Roles and Responsibilities in the National Flood Insurance Program. Mittler, Morgan, Shapiro, and Grill, American Institutes for Research.

The research described in this report was funded with Federal funds from the Federal Emergency Management Agency under contract # 282-98-0029 and under subcontract to the American Institutes for Research. The content of this publication does not necessarily reflect the views or policies of the Federal Emergency Management Agency, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

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EXECUTIVE SUMMARY

This study contributes to the comprehensive evaluation of the National Flood Insurance Program (NFIP) by examining state floodplain management roles and activities as defined and implemented through the NFIP. The study goals are to identify what activities and regulations adopted by states may or may not be working in the floodplain management system nationwide and to determine the most appropriate role for states in floodplain management. The study will also recommend ways in which state participation in the NFIP may be improved.

Since its inception, more than 20,000 communities in all 50 states have joined the NFIP. In some states, federal requirements have been integrated into existing state floodplain management programs, while in others, the federal requirements make up the bulk of if not all the floodplain management activities carried out by states.

State agency activity is important for the NFIP to function efficiently and effectively. Thousands of communities participate in the NFIP, far too many for Federal Emergency Management Agency (FEMA) to advise and supervise. State floodplain management offices, established to coordinate NFIP activities, perform multiple functions that fulfill, supplement, and complement federal activities. However, despite the federal mandate for states to designate a coordinating agency, the legislation that created the NFIP is largely silent about the states' potential contribution to floodplain management. The federal regulations at Title 44 Code of Federal Regulations (CFR) 60.25, which discuss state roles, do so in only a general way. As a result, FEMA has had to administratively create a role for the states. The void of mandatory federal directives, both before and after the implementation of the NFIP, resulted in statutes at the state level that might designate floodplain management roles and responsibilities for state agencies that conflict with, overlap, or exceed those roles and responsibilities designated by FEMA.

All fifty states participate in the NFIP and the Community Assistance Program–State Support Services Element (CAP-SSSE). By agreeing to participate in these programs, states must adopt certain roles specified in the Code of Federal Regulations and the annual Guidances to the CAP-SSSE, respectively. However, states are also encouraged to develop program elements that meet their specific needs. Therefore, state programs will share many characteristics but will also exhibit unique elements. When states join the NFIP, they take on two separate roles, both of which require the adoption of certain programs and policies. First, like local governments states are considered “communities” and must adopt adequate floodplain management regulations that at least meet NFIP minimum requirements (44 CFR 60.11 to 60.13). States must “comply with the flood plain management requirements of all local communities participating in the program in which State-owned properties are located” or establish appropriate regulations for state-owned property in non-participating local communities. They must also purchase Standard Flood Insurance Policies for state-owned structures or their contents.

Second, state agencies designated as “State Coordinating Agencies” must perform certain duties in this role to guide and upgrade local government capabilities to meet NFIP program requirements. Appendix 1 contains the sections of 44 CFR which pertain to the state role. To summarize, Sub-section 60.25 outlines state responsibilities under the general umbrella of

“demonstrating a commitment to the floodplain management criteria” by: **enabling** local communities to regulate development; **guiding** communities in ordinance administration; **informing** local government and the public about floodplain management requirements; providing **floodplain mapping assistance**; **notifying FEMA** of local compliance issues; **regulating** to prevent environmental and water pollution during floods; **coordinating** state floodplain management activities; and **training**.

Expanding population bases and the associated development in many states have often created new problems, or exacerbated existing flooding problems. Today there is a growing awareness that state agencies can make many decisions that positively or negatively affect the NFIP’s ability to achieve its objectives. In 2003, FEMA expanded the CAP-SSSE, which provides grants to states to provide technical assistance to communities, evaluate community performance, and help communities build and maintain their floodplain management capabilities.

The current CAP-SSSE initiative specifies eligible activities that FEMA can fund, but FEMA has not prescribed best methods for states to employ, thus respecting the prerogatives and independence of state and local governments. There may, however, be practices and relationships among federal, state, and local jurisdictions that are more effective in achieving floodplain management goals. Given the limited resources assigned to these tasks, it makes sense to explore alternative arrangements to find different approaches that can improve state capabilities. A historical perspective on how states approach land use planning is included to indicate the limitations and opportunities facing states.

Methodology

The study team developed seven hypotheses regarding state roles in floodplain management by combining a review of the background analysis on state floodplain management programs, and extensive consultation with experienced floodplain managers, leaders of the Association of State Floodplain Managers (ASFPM), past and present FEMA officials, and other knowledgeable experts. The hypotheses include causal factors believed associated with a program’s strength and effectiveness as well as a state program’s ability to maintain those characteristics over periods of time in which budget priorities, politics, and organizational charts shift.

To test the hypotheses, the study team purposively chose a group of ten states to investigate in detail. States were chosen in order to provide variance along several factors of interest, including: effectiveness of floodplain management programs; strength and formality of the legal and institutional foundations of the program; and, types of agencies housing the program. The study team conducted case studies of state programs directed by an interview guide or interview protocol. The interview questions intended to collect a variety of objective and subjective systematic and anecdotal evidence of factors that contribute to the evolution, structure, and effectiveness of state floodplain management programs.

Based on a review of the background research, case studies, and an analysis of comparable data about the ten state programs, several conclusions are formulated and discussed. The conclusions form the basis for the report’s recommendations. Each recommendation is

prioritized and directed toward a specific participant in the nationwide program for floodplain management. The recommendations provide possible solutions to problems and avenues to take advantage of opportunities identified during the study process.

Recommendations

The NFIP has been based primarily on a long-term relationship between the federal government and local communities that choose to participate. By statute, the state's role has been as a secondary assistant to the federal government in training and aiding local communities. The recommendations include major changes to the state role in the program and enhancements to the current role. The following recommendations are provided in summarized form. The full text for each recommendation is included in Section 6.1.

FEMA

Essential Actions

State Roles and Responsibilities Recommendation #1 (SR1): *FEMA should initiate in partnership with the states a process to amend the NFIP to provide the states with a substantial role in the NFIP, to take advantage of state capabilities and land use authorities that reside with states. One consequence will be stronger states that will help ensure that floodplain management can guide development and redevelopment to be at lower risk from flooding and to prevent increases in flooding potential.*

SR2: *Review, update, publish and enforce a comprehensive administrative process for addressing NFIP compliance violations in a systematic manner, beginning with identification of the violation and ending with final resolution. Each party to the compliance action must be knowledgeable of the process and acknowledge the deadlines. This process must include public disclosure of the compliance action. Each party to the compliance action must be knowledgeable of the process and acknowledge the deadlines. This process must include public disclosure of the compliance action.*

SR3: *FEMA should implement voluntary state Cooperating Compliance Partner (CCP) program modeled on FEMA's Cooperating Technical Partner (CTP) mapping program. The CTP Program allows communities, regional agencies, and State agencies that have the interest and capability to become active partners in the FEMA Flood Hazard Mapping Program.*

SR4: *FEMA should assign FEMA Natural Hazard Program Specialists in the regional offices to State NFIP Technical Assistance duties only.*

SR5: *Improve the CIS, making it the single most valuable online tool for state officials to 1) access community claims information, 2) access FEMA policy interpretations through official and unofficial policy manuals, and 3) maintain community contact information.*

Other High Priority Actions

SR6: *At the region and headquarters levels, FEMA should accommodate state regionalization of floodplain management tasks by streamlining communication from state regions to the FEMA region. Regionalization refers to the delegation of state responsibilities to multiple field offices, district or regional offices. FEMA can do this by accommodating a single, direct state link to the FEMA Region and encouraging states to consider regionalizing staff when sufficient staff are available.*

SR7: *FEMA should institute a two-tiered staffing requirement for states based on the number of NFIP communities in the state. Each state is currently encouraged by the CAP-SSSE agreement to employ at least one full-time employee, dedicated to NFIP tasks and funded through CAP. A threshold of 300 NFIP-participating communities, for instance, would trigger a new requirement for an additional CAP-funded full-time employee for NFIP tasks.*

Medium Priority

SR8: *FEMA should use the internet to open the lines of communication between FEMA regions and all state agencies and staff. Reinstate an on-line NFIP Policy Manual for states and Regions and create a question and answer blog for the benefit of all readers.*

Association of State Floodplain Managers (ASFPM)¹

Essential Actions

SR9: *Continue to support the formation of state associations and chapters. In 2002, there were 32 states with associations, including several states which participate in regional associations (ASFPM 2002). According to the August 2006 ASFPM web site, there are 41 states with associations. The associations play a critical role in supplementing the resources of states and communities, and in providing a non- governmental, peer-to-peer information source. FEMA should also continue supporting these associations to the degree possible by providing speakers, hosting workshops, and recognizing contributions and feedback from association leaders.*

SR10: *The ASFPM should aggressively publicize the Certified Floodplain Manager CFM program to local communities where floodplain managers may not be aware of the ASFPM, to colleges and universities with hazard programs, to a multitude of state agencies only peripherally involved in state floodplain management, and to high level state officials who have the ability to influence the required credentials for state floodplain managers.*

¹ The ASFPM is a private non-profit organization similar to the Red Cross. Within the organization are 24 local chapters made up largely of the local floodplain management professionals implementing the NFIP program.

State Officials

Essential Actions

SR11: *As evidenced by the conclusions of this report, state floodplain management responsibilities extend beyond the day-to-day tasks of the State NFIP Coordinator. State elected officials, legislators, agency directors, and departmental liaisons each have a responsibility to support the state's overall program of floodplain management by ensuring that the State Coordinators have tools essential to their jobs. One example might be funding an inventory of state buildings in the floodplain and ensuring the state's self-insurance status for flood damage. Armed with this essential knowledge, as well as a frank program assessment of the state's strengths and weaknesses, the State Coordinator is prepared to take advantage of windows of opportunity, such as flood disasters or changes in administration. Also, the state can more effectively fulfill its role in the NFIP partnership.*

SR12: *State officials should integrate state-level environmental reviews of floodplain projects into local government permitting processes. This recommendation is particularly relevant for local communities with efficient permitting processes and heavy development pressure.*

Other High Priority Actions

SR13: *State officials should implement agency policy to require that state staff receive CFM certification from the ASFPM and provide funding for staff to take advanced training courses in floodplain management-related topics. State staff must be recognized experts in the field. Provide training for other state agencies to allow development of a cadre of CFMs in various agencies who can coordinate actions to ensure effective implementation of state policies for floodplain development.*

SR14: *State officials should explore the concept of regionalization for state staff. If geographical relocation of staff is not feasible, dividing staff responsibilities based on regions may be as effective. Ensure that staff relocated to regional offices still report to headquarters.*

SR15: *State officials should take advantage of the capabilities of sub-state authorities such as ASFPM chapters, professional associations, councils of government, regional planning districts, and FEMA regional staff to ensure that all state program goals are met.*

Medium Priority

SR16: *State officials should create career tracks for state floodplain management staff, especially technical staff such as engineers.*

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1. INTRODUCTION AND BACKGROUND

The National Flood Insurance Program (NFIP) created in 1968 with the passage of the National Flood Insurance Act, seeks to reduce the losses and risks associated with flooding. The Mitigation Division of the Federal Emergency Management Agency (FEMA) administers the program, which aims to: 1) provide flood insurance to building owners in participating communities as protection against flood losses; 2) reduce future flood damages through mitigation and implementation of floodplain management regulations; and, 3) reduce costs of disaster relief to the general taxpayer.

1.1 Study Goals

This study contributes to the comprehensive evaluation of the NFIP by examining state floodplain management roles and activities as defined and implemented through the NFIP. The study goals are exploratory to help identify the types of activities and regulations adopted by some states that may be helpful for other states to adopt and to determine the most appropriate roles for states in the floodplain management system given the lack of legal specificity regarding this issue in the NFIP's enabling legislation. The study also recommends ways in which state participation in the NFIP may be improved.

Specific questions to be answered by the NFIP Evaluation were set out in the *Design for the Evaluation of the NFIP*. This report addresses the questions that relate to the role of states in the overall program, including issues regarding state funding, the integration of the NFIP with other FEMA programs, and the institutionalization of floodplain management and flood mitigation throughout the fifty states. This report also addresses alternative institutional arrangements for states to enhance their role in floodplain management.

1.2 Report Structure and Approach

This report follows a scientific method of inquiry, although the nature of the study questions, data gathering techniques and small sample size are not conducive to quantitative analysis. Background information in Section 1.3 includes discussions concerning the evolution and current status of state floodplain management programs since the inception of the NFIP, how floodplain management programs are influenced by a state's land use policies, and a general description of variables that best describe state roles in floodplain management.

Following the background presentation, the report presents a description of the study methodology in Section 3, including the formulation of study hypotheses and how those hypotheses were used to develop the study protocol. The study team developed these hypotheses by combining a review of the background analysis on state floodplain management programs and extensive consultation with experienced floodplain managers, leaders of the ASFPM, past and present FEMA officials, and other knowledgeable experts. The hypotheses include causal factors believed associated with a program's strength and effectiveness as well as a state program's ability to maintain those characteristics over periods of time in which budget priorities, politics, and organizational charts shift.

To test the hypotheses, the study team purposively chose a group of ten states to investigate in detail. States were chosen in order to provide variance along several factors of interest, including effectiveness of floodplain management programs, strength and formality of the legal and institutional foundations of the program, and types of agencies housing the program. The study team conducted case studies of state programs directed by an interview guide or interview protocol. The interview questions intended to collect a variety of objective and subjective systematic and anecdotal evidence of factors that contribute to the evolution, structure, and effectiveness of state floodplain management programs. Case study summaries are presented in Section 4.

Based on a review of the case studies and an analysis of comparable data about the ten state programs, several conclusions are formulated and discussed in Section 5. The conclusions form the basis for the report's recommendations found in Section 6. Each recommendation is prioritized and directed toward a specific participant in the nationwide program for floodplain management. The recommendations provide possible solutions to problems and avenues to take advantage of opportunities identified during the study process.²

1.3 Background

The NFIP came into existence in 1968 when Congress realized that (1) flood disasters had placed an increasing burden on the nation's resources; (2) structural mitigation works designed to prevent flooding and protect citizens were not sufficient to adequately protect against growing exposure to future flood losses; (3) the private insurance industry alone could not feasibly make flood insurance available on reasonable terms and conditions; and, (4) a federal flood insurance program was feasible and could be initiated. Congress further realized that a program of flood insurance could protect against future flood losses through sound land use by minimizing exposure of property to flood losses and that the objectives of a flood insurance program should be integrally related to a unified national program of floodplain management.

Since its inception, more than 20,000 communities in all 50 states have joined the NFIP. In some states, federal requirements have been integrated into existing state floodplain management programs, while in others, the federal requirements make up the bulk of if not all the floodplain management activities carried out by states.

State agency activity is important for the NFIP to function efficiently and effectively. Thousands of communities participate in the NFIP, far too many for FEMA to advise and supervise. State floodplain management offices, established to coordinate NFIP activities, perform multiple functions that fulfill, supplement, and complement federal activities. However, despite the requirement for states to designate a coordinating agency, the legislation that created the NFIP is largely silent about the states' potential contribution to floodplain management. The federal regulations at Title 44 Code of Federal Regulations (CFR) 60.25, which discuss state

² The question regarding whether FEMA has federalized the nation's flood problem and thereby encouraged states to abdicate responsibility was determined to be unanswerable within the scope of the report. Also, initial interviews indicated that state and federal development in floodplains is a relatively minor problem that merits only general discussion herein.

roles, do so in only a general way. As a result, FEMA has had to administratively create a role for the states. The void of mandatory federal directives, both before and after the implementation of the NFIP, resulted in statutes at the state level that might designate floodplain management roles and responsibilities for state agencies that conflict with, overlap, or exceed those roles and responsibilities designated by FEMA.

Expanding population bases and the associated development in many states have often created new problems, or exacerbated existing flooding problems. Communities, especially those under growth pressure and with limited geographical opportunities for expansion, have found themselves making what they believed were mutually exclusive choices, deciding between growth and public safety. Today there is a growing awareness that state agencies can make many decisions that positively affect the NFIP's ability to achieve its objectives. In 2003, FEMA expanded the Community Assistance Program–State Support Services Element (CAP-SSSE) which provides grants to states to provide technical assistance to communities, to evaluate community performance, and to help communities build and maintain their floodplain management capabilities.

The current CAP-SSSE initiative specifies eligible activities that FEMA can fund, and outlines specific activities that states are required to conduct. States must develop five-year plans indicating how their program will meet the general goals outlined in the CAP-SSSE agreement. According to FEMA, the intent of the five-year plans was originally to get state and FEMA regional staff to think through their workloads over a multi-year period, and create a plan allowing them to provide a complete range of services to their communities. Secondly, it was intended that the planning exercise document resource short-falls to support efforts to obtain additional resources.³ FEMA has not prescribed best methods for states to employ, thus respecting the prerogatives and independence of state and local governments. There may, however, be practices and relationships among federal, state, and local jurisdictions that are more effective in achieving floodplain management goals. Given the limited resources assigned to these tasks, it makes sense to explore alternative arrangements to find different approaches that can improve state capabilities. A historical perspective on how states approach land use planning is included to indicate the limitations and opportunities facing states.

1.3.1 The Political Environment – A Historical Perspective

Although land use planning has only been a pervasive force in the United States since the start of the twentieth century, the relationships determining who would set policy among the federal, state, and local governments were established when the United States Constitution was adopted. (See Table 1 for the critical events and judicial decisions that shaped land use policy.) The 10th amendment to the Constitution reserved all rights not given to the federal government to the states. The Constitution initially made no mention of providing the federal government with any specific powers to make land use decisions nor did it delegate any powers whatsoever to local governments. Therefore, from a legal perspective, states alone had the right to determine land uses within their boundaries.

³ The CAP-SSSE Guidance for 2006 is included in Appendix 1.

The question of whether local governments have any inherent powers to make decisions affecting their municipalities arose during the 19th century as the country grew and moved west. According to Richardson et al. (2003), state constitutions gave local governments representation in state legislatures. These representatives ensured that their local governments “were permitted a wide range of pursuits that resembled private activity” including attempting to have railroads pass through their town (Richardson et al. 2003 p.7). One consequence of this process was widespread corruption.

By the mid-19th century, a debate over local government autonomy emerged, accompanied by litigation in several states concerning the role of local governments in economic activity. The local government pursuit of revenue often conflicted with private property rights. In several key legal decisions, Judge John Dillon of the Iowa Supreme Court ruled that municipalities are the creatures of the state, and their powers are limited to what state legislatures expressly grant, are necessarily or fairly implied, or are absolutely indispensable to carry out those powers that are granted. This decision, known as Dillon’s Rule, establishes that if a power in question is not expressly authorized by state statute or constitution, or cannot be necessarily implied from an already authorized power, it is presumed that the local government does not have that power.

At the time when Dillon’s Rule came to dominate most judicial thinking, opponents of state control over municipal matters, led by Judge Thomas Cooley of the Michigan Supreme Court, argued that municipalities possessed an inherent right of local self-government. In the aftermath of Dillon’s Rule, many states amended their constitutions to be in line with Dillon’s Rule while some states began to permit local “home rule,” where the state transferred power to local governments for the purpose of implementing local self-government.⁴

⁴ Refer to Table 5 below for a listing of states and determination regarding whether states govern by Dillon’s Rule or home rule.

TABLE 1: Important Events and Judicial Decisions Affecting Land Use Policies in the United States

Date	Event	Discussion
1791	10 th Amendment, U.S. Constitution	The Tenth Amendment provides that, [t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” The constitution makes no mention of any powers delegated to local governments.
1865	Clark v. City of Des Moines	Judge John F. Dillon of Iowa, the premier authority on municipal law at this time, ruled on the scope of municipal powers: “It is a general and undisputed proposition of law that a municipal corporation possesses and can exercise the following powers and no others: First, those granted in express words; second, those necessarily or fairly implied or incident to the powers expressly granted; third, those essential to the declared objects and purposes of the corporation, not simply convenient, but essential. Any fair, reasonable doubt concerning the existence of the power is resolved by the courts against the corporation, and the power is denied.” This language has become known as “Dillon’s Rule.”
1868	City of Clinton v. Cedar Rapids and Missouri River Railroad	In his decision, Judge Dillon defined the relationship between the state government and local government: “Municipal corporations owe their origin to, and derive their powers and rights wholly from, the legislature. It breathes into them the breath of life, without which they cannot exist. As it creates, so it may destroy. If it may destroy, it may abridge and control... We know of no limitation on this right so far as the corporations themselves are concerned. They are, so to phrase it, the mere tenants at will of the legislature.”
1903	Atkins v. Kansas	The U.S. Supreme Court has upheld the constitutionality of Dillon’s law consistently, initially in 1903. The court held in Atkins “[Local governments] are the creatures – mere political subdivisions – of the state for the purpose of exercising a part of its powers. They may exert only such powers as are expressly granted to them, or such as may be necessarily implied from those granted. What they lawfully do of a public character is done under the sanction of the state.”
1916	The first New York City zoning ordinance	The pioneering 1916 Zoning Resolution established height and setback controls and separated what were seen as functionally incompatible uses, such as factories, from residential neighborhoods. The ordinance became a model for urban communities throughout the United States as other growing cities found that New York’s problems were not unique.
1924	Standard State Zoning Enabling Act	A Standard State Zoning Enabling Act (SSZA), was developed by an advisory committee on zoning appointed by Secretary of Commerce (and later President) Herbert Hoover in 1921. After several revisions, the Government Printing Office published the first printed edition in May 1924 and a revised edition in 1926.
1925	Cincinnati adopts comprehensive plan	Cincinnati is the first American city to endorse a comprehensive plan for its growth and development.

1926	Euclid v. Ambler Realty Company	Opponents of zoning argued that it amounted to taking property without “due process” of law guaranteed by the federal constitution. The U.S. Supreme Court decided against the opponents in Euclid, recognizing that zoning is an appropriate extension of the community's authority inhered in the state’s “police power” to pass laws related to protecting the public health, safety, morals and general welfare. The historic opinion also contained a far-seeing passage suggesting that zoning must evolve to meet the changing needs of changing times: ". . . the meaning of constitutional guarantees never varies, the scope of their application must expand or contract to meet the new and different conditions which are constantly coming within the field of their operation."
1927	Publication of City Planning Enabling Act	In March 1927, a preliminary edition of the second model law, a Standard City Planning Enabling Act (SCPEA), developed by the Department of Commerce was released, and a final version was published in 1928.
1966	Reynolds v. Sims	Following the decision in Baker v. Carr in 1962, in which the U.S. Supreme Court decided that state reapportionment issues were judicial questions and could be heard in federal courts, the Supreme Court decided in Reynolds that the standard for state legislative districting would be “one-man, one-vote.” The impact of the decision was to end the dominance of small population rural counties in state legislatures.
1970	Congress fails to enact a National Land Use Policy Act	The National Land Use Policy Act of 1970 (S. 3354, 91st Cong., 2d Sess.) would have created a system of federal incentives to encourage states to develop comprehensive land development and conservation plans in conjunction with their localities. Congress considered but failed to adopt several versions of this bill for five years.

In a landmark U.S. Supreme Court decision in 1903 (*Atkins v. Kansas*), the justices ruled that local governments were subordinate to federal and state governments and upheld the basic principles of Dillon's Rule. It can be derived from this and subsequent Supreme Court decisions that municipalities can have "home rule" but only after their states relinquished inherent state powers to them.

During the 20th century, cities first became urbanized, and then suburbanized at an accelerated pace. Commensurate with the growth was the demand for municipal services. With the blessings of the state legislatures, large cities began to plan their growth and development and establish zoning regulations. New York City was the first to adopt a zoning regulation in 1916, and Cleveland, Ohio, was the first to adopt a comprehensive plan in 1925. In 1926, the Supreme Court ruled in favor of community zoning, noting that it is an appropriate extension of the community's authority inherited in the state's "police power" to pass laws related to protecting the public health, safety, morals and general welfare.

The spread of comprehensive city planning and zoning was fast, prompted by the actions of Herbert Hoover, then Secretary of Commerce. Hoover was an advocate of planning and formed the Advisory Committee on Zoning in 1921, later reformulated as the Advisory Committee on City Planning and Zoning (ACCPZ), to develop draft model planning and zoning statutes that could be adopted by states. A *Standard State Zoning Enabling Act* (SSZA) was created first, with the first edition being published by the Government Printing Office in 1924 and a revised edition in 1926. The publication of A *Standard City Planning Enabling Act* (SCPEA) followed shortly thereafter, with a preliminary edition released in 1927 and a final edition in 1928.

According to Platt (1976), both model laws contain identical characteristics: 1) the delegation of state power to local units of government (the power to engage in land use planning, zoning, and subdivision regulation); 2) the power is discretionary; and, 3) if adopted, the procedure set forth in the state enabling act must be followed precisely.

The decision to produce enabling laws for states to adopt was made because the laws would adhere to Dillon's Rule and have a high probability of withstanding legal challenge, and because land use planning was considered a local or urban issue. At this time, states were not actively involved with local growth issues. The development of these laws also corresponded with the early development of land use planning as a professional endeavor, promoting the professionalization of the field. The two model codes remain the basis for today's laws.

To deliver the services citizens sought and also to deliver those that were mandated by federal and state laws, communities have sought and often been granted "home rule" powers. Unfortunately, home rule cannot be categorized as a set of common characteristics. In some cases, home rule has been limited to specific powers delegated by states, and, in other cases, has been expansive. Healy (1976) also notes that communities

granted “local control” over land use may mean one of three things: 1) no control at all by local government, with all rights reserved to the landowner; 2) control by and for the local community, with community interests given preference over those of the wider society; or, 3) control by the local decision makers, regardless of whether their decisions reflect the rights of property owners, the community, or the wider society. (p. 161-162)

Variations in local control of land were common because state legislatures were dominated by rural counties where comprehensive plans and zoning were rarely endorsed. By 1900, most states had adopted constitutions that established legislative bodies using the federal model of house representation by population and senate representation by county, usually one senator per county. Because most counties never urbanized, as the 20th century progressed, state legislatures were progressively being dominated by rural counties with a smaller and smaller percentage of the state’s population. Often the most important county official was its state senator who could either shepherd legislation to aid the county or oppose legislation that threatened the county’s way of life. In extreme cases, like South Carolina, senate rules permitted the opposition of a single senator to hold up undesired legislation and essentially veto it (Mittler 1993). One consequence of rural domination of state legislatures was opposition to any state involvement in local land use decisions, permitting local politicians to pursue land use as they saw fit.

While urban communities and their citizens complained that they were unfairly represented in state legislatures, nothing was changed until 1962 when the United States Supreme Court in *Baker v. Carr* ruled that federal courts could hear reapportionment cases. Four years later, in *Reynolds v. Sims*, the Supreme Court found that state legislatures that were apportioned using the federal model were unconstitutional and both houses in state legislatures must be apportioned by population. The “one-man, one-vote” ruling changed the balance of urban, suburban, and rural representation in state legislatures and has led several state legislatures to consider state involvement in land use decisions.

Bosselman and Callies (1971) reported that there was a “quiet revolution in land use control” in the country during the 1960s to overthrow “the feudal system under which the entire pattern of land development has been controlled by thousands of individual local governments, each seeking to maximize its tax base and minimize its social problems, and caring less what happens to all others.” (page 1) New laws were replacing the old, each providing some degree of state or regional participation in land use decisions. Nine examples were discussed at length including three that directly affected floodplains, the Massachusetts Wetlands Protection Program, the Wisconsin Shoreland Protection Program, and the New England River Basins Commission.

On the heels of the quiet revolution in land use control, Senator Jackson of Washington introduced the National Land Use Policy Act of 1970 to create a system of federal incentives to encourage states to develop comprehensive land development and

conservation plans in conjunction with their localities. The bill would establish a national land use policy and grants would be given to states to prepare and implement land use programs for the protection of areas of critical environmental concern and the control and direction of growth and development of more than local significance.

Between 1970 and 1975, several versions of the National Land Use Policy Act were introduced and amended. (See Bosselman and Callies 1971, for a transcript of the National Land Use Policy Act of 1971 (92nd Congress, Senate 922, H.R. 4332.)) None was ever enacted. According to Plotkin (1987), the attempts in the early 1970s to enact a national land use policy failed for three reasons:

- Standards – no agreement on what might entail federal goals or guidelines; state planners preferred no standards to accommodate project variations, which would be individually determined.
- Sanctions – linking the bills to funding of several desirable federal programs caused the most resistance with the belief that program descriptions would have to meet federal ideas of what was right rather than local opinions.
- Takings – senators from the west argued that the bills would foster takings and should permit the landowners compensation for unwarranted actions.

Opposition was not surprising given that congressmen had usually served in state legislatures before election to Congress and were steeped in the tradition of keeping land use policy local.

The failure of Congress to enact a national land use policy should not delude anyone into believing that there is no federal policy toward land use. Platt (1976) argues, in fact, that the country “has too many policies. For 200 years, the only consistency in federal policies and actions with respect to land has been their mutual inconsistency” (page 11). Congress has gradually enacted multiple laws, each focusing on one or a few aspects of land use and each supporting different land use goals. Laws and then decisions based on them are made independent of other laws and decisions leading to systematic inconsistencies and the pursuit of sub-optimal goals.

While it is beyond the scope of this project to investigate all federal laws affecting floodplain management and determine how they interact, Table 2 displays a limited number of federal non-structural hazard mitigation policies that landowners may voluntarily subscribe that are intended to reduce future losses from flooding. This list includes just a fraction of federal programs affecting floodplain management, but they illustrate the three main avenues of public intervention in the private land use decision process: acquisition, regulation, and persuasion (offering incentives for the owner to conform voluntarily to public policy) (Platt 1976). Also, like the NFIP, many of these programs have limited state participation.

TABLE 2: Non-Structural Federal Flood Loss Reduction Programs Affecting Landowners

Program	Federal Agency in Charge	Program Goals – Flood Loss Reduction
Hazard Mitigation Grant Program (HMGP)	FEMA	Acquisition, elevation, and relocation of structures after floods
Flood Mitigation Assistance (FMA)	FEMA	Acquisition and relocation of structures before floods
Community Development Block Grant (CDBG)	Housing and Urban Development (HUD)	Acquisition and relocation of low-income flood-prone homes
HOME Investment Partnerships Program	HUD	Acquisition and relocation of low-income flood-prone homes
HUD Disaster Recovery Program	HUD	Acquisition and relocation of low-income frequently flooded homes after floods
Land Acquisition	U. S. Fish and Wildlife Service (FWS)	Acquisition of easements and property for addition to the national wildlife refuge system
Post-Disaster Economic Recovery Program	Department of Commerce Economic Development Administration (EDA)	Provision of low-interest loans for relocation of frequently flooded homes
Physical Disaster Loans	Small Business Administration (SBA)	Provision of low-interest loans to restore wetlands and relocate non-farm structures
Emergency Watershed Protection Program	Natural Resources Conservation Service (NRCS)	Provision of assistance to flood-prone landowners, including easements and funds to set back levees
Wetlands Reserve Program	NRCS	Acquisition of easements to restore wetlands and floodplain habitat
Conservation Reserve Program	U. S. Department of Agriculture (USDA)	Offering of financial incentives to farmers to establish soil-conserving vegetation on eligible cropland
Rivers, Trails, and Conservation Assistance Program	National Park Service (NRS)	Establishment of projects to manage and conserve river and trail corridors
Floodplain Management Services Program	U. S. Corps of Engineers (USACE)	Provision of technical assistance and general planning guidance for non-structural floodplain programs including acquisition
Public Law 84-99 Program	USACE	Provision for the repair of damaged levees and the acquisition of flooded land protected by levees
Conservation Contracts	Farm Service Agency (FSA)	Forgiveness of debt from farm loan programs in exchange for an agreement to conserve wetlands and other floodplain habitats
Section 206 Program	USACE	Restoration of aquatic habit, including floodplain habitat
Partners for Fish and Wildlife	FWS	Restoration of wetlands and riparian habitat on private land
Section 1135 Program	USACE	Restoration of wetlands and floodplain habitat previously impacted by a USACE project
Stewardship Incentive Program	U. S. Forest Service (FS)	Provision of grants to private landowners to establish and maintain buffers and other conservation objectives
Wildlife Protection Development Grants	NRCS	Provision of technical and financial assistance to private landowners to develop and improve wildlife habitat on their property

Wetland Protection Development Grants	Environmental Protection Agency (EPA)	Development or enhancement of wetlands
North American Waterfowl Management Program	Department of Interior (DOI)	Restoration of waterfowl populations through habitat conservation
North American Wetlands Conservation Fund	DOI	Conservation of wetlands for migratory birds and other wildlife
Environmental Quality Incentives Program	USDA	Provision of assistance to farmers implementing conservation practices
Federal Aid In Wildlife Restoration	FWS	Restoration of wild birds and mammals by acquisition, development, and management of habitat
Small Watershed Program	NRCS	Implementation of measures that reduce runoff from farms, including tillage practices and watershed restoration

1.3.2 The Effect of State Programs on Local Land Use and Floodplain Management

As stated at the start of this report, the goals of the NFIP are: 1) provide flood insurance to building owners in participating communities as protection against flood losses; 2) reduce future flood damages through mitigation and implementation of floodplain management regulations; 3) reduce costs of disaster relief to the general taxpayer. Considering the complex political environment in which land use policies are immersed, it can be argued that an effective state program supported by FEMA to meet these goals should at a minimum be applicable both to states that follow Dillon's Rule and those that promote home rule, and to states that actively regulate floodplains or those that passively support local choices. It is also likely that a comprehensive national floodplain management program that includes mandatory regulations would challenge those benefiting from the status quo and be perceived in the same light as a national land use policy and thus not be likely to get congressional support.

Before establishing what might constitute the guts of new federal initiatives to enhance the states' ability to meet the goals of the NFIP, a review of critical research into what constitutes effective state participation in land use and a discussion of recent advances in state floodplain management is presented. The intent of this section is not to conduct an exhaustive literature search but to summarize critical publications and events that convey the development of state floodplain management comprehensively.

Recent Research – Richardson and his colleagues (2003) investigated whether local governments in states that employ Dillon's Rule to define the power of local governments were hindered in their ability to curb urban growth. They compared states that employ Dillon's Rule with those that employ home rule. Their main conclusion was that Dillon's Rule neither prohibits nor hinders growth management. They also reaffirmed a long-held belief that strong local autonomy can “complicate regional collaboration,” necessitating a more powerful role for states to manage more effective regional growth management.

In their investigation of the effect of Dillon's Rule on urban growth, Richardson, et al. (2003) noted that states that successfully managed urban growth used different approaches if they adhered to Dillon's Rule or home rule. They concluded:

“In short, a state's adherence to Dillon's Rule in no way precludes strong action to deal with growth-related actions. In such states, legislatures retain the power to grant localities broad freedom to engage in growth management. Conversely, legislatures in home rule states can pass laws that restrict municipalities from engaging in exclusionary practices or other activities that appear to undermine important state objectives.”
(Executive Summary, unpaginated)

The importance of the state in growth management could not be overstated by Richardson and his colleagues. They concluded that “effective growth management

efforts hinge on leadership and coordination at the state level” whether a state uses Dillon’s Rule or not (Richardson, et al. 2003, p. 22).

Leigh (2003) investigated the role of states in urban land redevelopment to identify how states could contribute directly to the redevelopment of vacant and abandoned properties. The importance of the state in urban land redevelopment mirrored the findings of Richardson and his colleagues in their investigation of urban growth. However, Leigh also identified a “number of powers states can exploit to energize local redevelopment efforts” as well as prevent future deterioration (Leigh 2003:v). While most of the programs do not directly correspond to floodplain management, the basic thrust of the investigation was to demonstrate how states can use their powers to aid local communities in land use programs. One particular idea was to add provisions for the rehabilitation of existing buildings to state and local building codes, making it easier and less expensive for owners to rehabilitate their structures. Leigh cited other research results that indicate that rehabilitation spending increases significantly after such codes are implemented and the cost of redeveloping old buildings drops by 10 to 40 percent.

Using data provided by the Institute for Business & Home Safety in its Catastrophe Paid Loss Data Base for losses experienced by private insurers between January 1, 1994 and December 31, 2000, Burby (2003) tested whether state planning mandates reduced insured losses from natural disasters. After examining state statutes, Burby found that 26 states did not require local governments to prepare comprehensive plans and 24 did. Of the 24 that required comprehensive plans, 9 states specifically required the mandated plans pay attention to natural hazards. Burby reported the effect of state planning on insured losses thusly:

“Per capita insured losses to residential property in natural disasters between 1994 and 2000 averaged over \$33 in states that did not require local governments to prepare comprehensive plans. Losses to commercial property in those states averaged over \$4 per capita. In contrast, per capita losses were much lower (\$26 and \$3 respectively) in states that required local governments to prepare plans, and lower still (\$19 and \$2 respectively) when states required both plans and attention to hazards. Difference of means tests using logarithmic transformation of losses to correct for the skewed nature of disaster losses indicate that these differences are statistically significant and not due to chance variation in the data” (2003, p.13).

Although Burby’s data did not include flood losses because flood insurance was not offered by private insurers, the results do include wind losses from hurricanes that accompanied large flood losses in states that both required and did not require comprehensive plans. His results lend support to the hypothesis that the same results would be found for flood losses.

Floodplain Management – The first comprehensive study of non-structural floodplain management, referred to “regulating flood-plain development,” in the United

States was conducted by Murphy (1958), a protégé of Gilbert White, considered the father of modern floodplain management. The study was partially inspired by the enactment of the Federal Flood Insurance Act of 1956, which was never implemented because Congress failed to appropriate the necessary funds needed to carry it out. Murphy's findings and observations provide a baseline and framework for understanding subsequent assessments of floodplain management related to flood prevention rather than flood control that may explain provisions of the NFIP enacted in 1968. (See Table 3 for a list and a discussion of important events and assessments of state floodplain management since 1956.)

In his discussion of contemporary floodplain management, Murphy (1958) highlighted several provisions of the Federal Flood Insurance Act of 1956 that later were included in the NFIP. Two such provisions related to floodplain regulations: 1) no insurance or reinsurance shall be issued to any property to be in violation of state or local flood zoning laws; and, 2) no insurance or reinsurance shall be offered to any properties in a geographical area that has not adopted and kept in force flood zoning laws.

TABLE 3: Important Assessments and Events Concerning Floodplain Management

Year	Event or Assessment	Discussion
1956	Federal Flood Insurance Act	Extensive losses resulting from the Southwest floods of 1951 in Kansas, Missouri, and Oklahoma and the 1955 floods following Hurricanes Connie and Diane in combination with the lack of private flood insurance were the catalysts that inspired Congress to enact the first national flood insurance program. However, the program was never implemented because Congress failed to appropriate the necessary funds.
1958	Francis C. Murphy conducts the first assessment of floodplain management in the United States	Murphy finds that seven states have enacted and implemented effective programs to regulate development in floodplains. He further finds that only eight communities had developed flood zoning ordinances prior to the enactment of the Federal Flood Insurance Act of 1956 and 41 others had created ordinances after enactment. He concludes that floodplain management has been slow to take hold and up to then has been ineffective.
1958	The First National Conference on Flood Plain Regulations and Insurance	Representatives of federal, state, and local government meet in December in Chicago to discuss methods of solving flood problems. The meeting is organized by Gilbert White, and provides a recommendation from experts that the 100-year flood standard be used by the NFIP.
1960	Flood Control Act (Public Law 86-645)	Section 206 authorized the U.S. Army Corps of Engineers (USACE) to provide technical information, technical planning assistance, and guidance to aid states, local governments, and Indian Tribes in identifying the magnitude and extent of the flood hazard and in planning wise use of the flood plains.
1962	Henry C. Morse conducts a survey of state agencies to determine the role of states in guiding land use in flood plains	Morse finds that, since 1958, only one state has enacted flood plain regulations and Hawaii has become the first state to adopt a state land use plan. For the most part, states are mostly concerned with flood control projects and programs.
1965	The Water Resources Planning Act (Public Law 89-80)	The Water Resources Planning Act established the federal interagency Water Resources Council (WRC) to maintain a continuing study and periodically prepare an assessment of the adequacy of supplies of water to meet national requirements. As part of its charge the WRC was to include an assessment of flood management, considering flood control structures and measures including reservoirs, channels, levees, and land treatment as well as flood prevention measures including land use regulation, flood proofing, flood warning, and flood insurance.
1968	The National Flood Insurance Act (Public Law 90-448)	Section 1302(C) of the NFIP stipulated that “the objectives of a flood insurance program should be integrally related to a unified national program for floodplain management and...the President should submit to Congress for its consideration any further proposals necessary for such a unified program...” Responsibility for the development of the Unified National Program was first assigned by the Office of Management and Budget to the WRC. It was first submitted in 1976 and subsequently revised in 1979, 1982, 1986, and 1994. Each version of the report included an evaluation of the roles of federal, state, and local governments and recommendations to enhance their abilities to meet NFIP goals.
1976	Formation of the Association of State Floodplain Managers (ASFPM)	The NFIP coordinators from 6 states in FEMA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin) formed a loose association to coordinate their concerns about the NFIP and interact with FEMA with a single voice. Their success in affecting FEMA decisions led to the creation of a formal association that has grown into the leading professional advocate of floodplain management in the United States.

Year	Event or Assessment	Discussion
1978	President Carter issues Executive Order 11988, Floodplain Management	E. O. 11988 directed federal agencies to avoid unwise development in floodplains and to seek locations for development outside floodplains.
1980	FEMA establishes the State Assistance Program	President Carter created FEMA in 1978 to consolidate federal disaster related programs into one agency. In the following year, FEMA established the State Assistance Program to fund the development of state floodplain management capability to assist communities carry out their requirements in the NFIP. This program has evolved into the Community Assistance Program (administered through the states) and continues to be the most significant source of funds for state floodplain management programs.
1982	WRC and ASFPM jointly survey NFIP coordinators to understand the state of state floodplain management.	As part of the WRC charge to conduct research on important water resources topics, the council, in conjunction with the ASFPM, surveys NFIP coordinators to understand the state of state floodplain management. The results of the survey indicate that there were 27 states that had adopted statutes authorizing state regulations for channel, floodway, or flood fringe areas. In addition, most state programs were in their fledgling state, and implementation was impeded by inadequate enabling authority, inadequate funding, poor flood data, public apathy, and lack of intergovernmental coordination.
1985	Raymond J. Burby and Steven P. French lead a team of investigators performing a national assessment of flood plain land use management.	Burby, French, and their colleagues assessed the state of floodplain management in the United States, focusing mainly on community adoption and implementation of flood plain land use management ordinances. In their study, the investigators evaluated the effect of state flood hazard management programs on local programs. They found that “state flood hazard management programs are instrumental in stimulating local programs to protect property and preserve the environment, and they are instrumental in increasing the local administrative priority of flood hazard management” (Burby, French et al. 1985, p. 129 and p. 133).
1989	ASFPM publishes its first independent survey of state floodplain management.	The ASFPM begins conducting surveys of the NFIP State Coordinators to document what states are doing to further activities in the Unified National Program for Floodplain Management, to update activities reported in previous surveys, and to gather 1-2 page descriptions of state programs. The surveys provide a reference for states and examples for others to evaluate. Subsequent surveys are published in 1992, 1995, and 2003.
1991	The Community Rating System (CRS) is introduced by the Federal Insurance Administration (FIA)	The CRS is the first incentive offered through the NFIP for communities to voluntarily adopt regulations exceeding NFIP minimums. Premiums for NFIP policy holders are reduced in 5% increments up to 45% as communities adopt more restrictive policies.
1992	L. R. Johnston Associates and a project team that includes ASFPM members conduct an assessment of floodplain management in the United States.	This assessment provides the most complete history of floodplain management in the United States and a comprehensive description of the state of the unified national program of floodplain management. The report relies on published data rather than new surveys.
2003	ASFPM publishes “Effective State Floodplain Management Programs.”	Thirty-seven years after its inception, ASFPM develops ten principles that characterize effective state floodplain management programs. The purpose of the report is to provide a set of guidelines rather than a “how-to” manual.

Also after discovering a low level of local community adoption of flood zoning regulations both before and following the enactment of the Federal Flood Insurance Act of 1956, Murphy (1958) questioned whether floodplain management could be adopted voluntarily by local communities without linking the provision of programs such as flood insurance to community adoption of flood zoning. He concluded:

“The reluctance of so many communities to enact zoning ordinances and building codes with any reference to flood restriction is so great that it may be doubted whether continuation of this voluntary, or permissive, approach to the problems of flood areas will produce the hoped-for results. Effective and widespread use of these regulatory measures may well require further action by the federal government in the form of offering some financial incentive to accomplish them or withholding some financial assistance if they are not accomplished” (p. 155-156).

The importance of Murphy’s comments are that critical provisions of the NFIP that were included in the 1968 law were understood as early as the development of the 1956 Federal Flood Insurance Act and the need to mandate the adoption of floodplain management ordinances by local governments as a condition of being eligible for flood insurance that was the high spot of the 1973 amendment to the NFIP was understood as early as 1958.

Murphy’s conclusions, stated above, were supported by three of his main findings. First, by 1958 only seven states had enacted and were enforcing laws regulating the floodplain and these were characterized by their focus on channel-encroachment, defined as the “constriction in the width of the channel that aggravates flood conditions” (page 14). All seven states uniquely defined floodways and areas where construction was prohibited, and state agencies in charge of mapping had different goals and standards to meet. The seven states and the year their laws were adopted⁵ were (in alphabetical order) Connecticut (1955), Indiana (1945), Iowa (1949), Massachusetts (1939), New Jersey (1929), Pennsylvania (1913), and Washington (1933).

Second, “probably no more than eight communities had effective flood plain zoning before 1955” (Murphy 1958:44). Third, two years following the passage of the Federal Flood Insurance Act of 1956, just a total of 49 municipalities and counties had adopted flood plain zoning.

⁵ Classifying states into categories related to floodplain management characteristics in the Murphy and subsequent assessments has not been uniformly accomplished. Murphy as well as other researchers has not left a paper trail to determine what criteria were considered to make judgments concerning the existence of a state program in flood plain management. In subsequent research, conflicting conclusions exist, such as which states adopted floodplain management regulations prior to 1958. The main reason for the discrepancy is whether the researchers included flood control regulations, which typically predated land use regulations. In addition to conflicting interpretations of state actions, one problem associated with decisions concerning whether states have adopted certain regulations, usually enabling acts transferring powers to local governments to enact ordinances concerning land use and zoning, is that states with broad home rule regulations are not required to pass such single topic enabling acts because the preexisting broad home rule regulations have already transferred the powers to the local governments. Consequently, some home rule states that may actively encourage and support local floodplain management are not included in lists of proactive states that are characterized by having enacted state statutes. As a result of these issues, findings of previous researchers presented in this paper should be interpreted fairly broadly and not necessarily as comparable.

The overall state of floodplain management in 1958 may be best characterized by one of Murphy's overall conclusions: "the record shows that, while they have been advocated for decades, the use of [flood plain] regulatory measures has been very limited; and...they have in many instances not been very effective" (Murphy 1958:128).

Four years after the publication of Murphy's assessment, Morse (1962) conducted a survey of state planning and development agencies, state water resource agencies, and a small sample of city or regional planning agencies "to determine how the states can cooperate effectively with Federal and local governments and with other states in reducing flood damage potential by guiding and controlling land use in flood plains" (p. 2-3). Responses to written inquiries about state programs were received from 45 state planning and development agencies, 43 state water resource agencies, and 15 city or regional planning agencies.⁶

Morse (1962) found that states were engaged in four general activities related to flood damage prevention: "(1) collection, distribution, and interpretation of flood data; (2) review and construction of flood control projects; (3) flood plain regulations; and (4) planning programs affecting land use in flood plains" (page 4). According to Morse (1962), all but one state reported that they collected flood data but few had established policies and procedures for analyzing and publishing the information in forms that would be useful for any but the agency collecting the data. However, after the passage of the Flood Control Act of 1960, which authorized the U.S. Army Corps of Engineers to collect and present flood data for communities in a uniform manner, there was a belief that a national mapping program had begun.

The review and construction of flood control projects has traditionally been the major activity conducted by state water resource agencies. Either by federal law, state statute, or both, states have been involved in the planning, construction, and maintenance of dams, levees and other protective works. Their "reliance upon protective works to solve flood problems is further demonstrated by the fact that eighteen of the twenty-seven states that have authorized agencies to prepare over-all water resource plans have limited such plans to flood protective works" (Morse 1962:13-14). Federal funding may be one of the main causes for this outcome. According to Morse, "since the major share of Federal monies goes to flood protection works, the strongest relationships are between Federal and state agencies whose primary concern is with flood control" (Morse 1962, p. 52).

Between 1958 and 1962, Morse (1962) found that one state, Kentucky, had enacted an encroachment of floodway statute. Adding this to the seven mentioned by Murphy (1958), there were now eight states with floodplain management statutes. In addition, the state of Hawaii enacted the first state land use statute that established the concept of state zoning in 1961, "one purpose of which is to establish conservation districts for, among other things, preventing floods and soil erosion" (Morse 1958, p. 21).

Hawaii's comprehensive plan was the only one found by Morse. Six other states – California, Colorado, Minnesota, New Jersey, Tennessee, and Wisconsin - reported having "parts

⁶ A copy of the questions asked was not included in Morse (1962).

of a comprehensive plan to which state-wide water resource and flood damage prevention plans could be related” (Morse 1958, p. 28).

In a different vein, Morse (1962) noted that 26 states that had water resource agencies that prepared state-wide water resource plans did not include any mention of other state programs that might impact land use in flood plains. In his opinion, development programs in these states suffered because they did not consider potential adverse effects caused by flooding. He concluded that the “most effective planning programs were found in those states where the state planning agency was located in the office of the Governor or in one of his staff agencies” (Morse 1962:56). If located elsewhere, planning was generally limited to the single concerns of the home agency.

One of the most interesting findings by Morse was the inverse relationship between the number of state agencies with responsibilities for water resource tasks related to flood damage protection (in the majority of states two or more), and the comprehensiveness of these tasks. When responsibilities were split between two or more agencies, he found that “the state program has been weak and has generally been limited to data collection and project review” (Morse 1962, p. 35). When one agency had total responsibility, comprehensive programs flourished. Of the fifteen states having a single agency in charge of state water resources activities related to flood damage protection, six (Connecticut, Indiana, Kentucky, New Jersey, Pennsylvania, and Washington) were states that had enacted state floodplain management statutes and one (Hawaii) had enacted a state land use plan.

After analyzing the collected data, Morse recommended that “the state’s role in a comprehensive state flood damage prevention program include but not be limited to: (1) preparation of a statewide comprehensive plan and policy for development, and a statewide water resource plan that relates to the over-all development policy; (2) collection, distribution, and interpretation of flood data; (3) programs to promote public understanding of flood problems; (4) state regulation of land use in flood plains; (5) financial assistance to localities for solving flood problems; (6) technical assistance; and (7) review of Federal flood control projects” (Morse 1962, p. x).

The next major assessment of state floodplain management took place in 1982, 20 years after Morse’s assessment. During that 20-year gap, several critical events occurred that transformed the fundamental nature of state floodplain management. First, the Water Resources Planning Act of 1965 established the federal interagency Water Resources Council (WRC) with the continual responsibility to study and assess the adequacy of supplies of water to meet national requirements. As part of its assessment, the WRC included the study of floods, flood control, and flood prevention as critical components of a national water resources program (US WRC 1968).

Second, Section 1302(c) of the NFIP enacted in 1968 called for the continual development of a unified national program for floodplain management integrating federal, state, local government programs and policies. The Office of Manpower and Budget assigned responsibility for the development of the unified national program to the WRC, which issued written reports in 1976 and 1979. A third report with the same title, *A Unified National Program for Floodplain Management*, written by the Interagency Task Force on Flood Plain Management

(1986) updated the work of the WRC and some of its observations are discussed below. A fourth report, also by the Interagency Task Force (then chaired by FEMA) was issued in 1994.

Third, in response to initial federal policies issued to implement the NFIP, NFIP coordinators from 6 states in FEMA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin) formed a loose association to coordinate their concerns about the NFIP and interact with FEMA with a single voice. Their unified efforts led to the creation in 1976 of the Association of State Floodplain Managers (ASFPM), a professional association dedicated to advance the state of floodplain management and to work with the federal government in creating national policy (ASFPM 2003b). As will be described below, the professionalization of the field of floodplain management has been a major factor in the growth of the knowledge base and capacity of state floodplain managers and their staffs. In essence, the void created by the inability of Congress to enact a national land use policy act has been substantially filled for floodplain management by the policies and programs advocated by the ASFPM that have gained widespread adoption. Examples of ASFPM suggestions “incorporated into law or included in new federal programs [are] aspects of flood insurance to address repetitive losses, post-disaster mitigation funding, the Community Rating System, a national council on mapping standards, and . . . the major increase in funding for Flood Map Modernization begun in FY’03” (ASFPM 2003:2).

Fourth, in 1977 President Carter issued Executive Order⁷ 11988, Floodplain Management, directing federal agencies to avoid supporting or participating in actions negatively affecting floodplains. This executive order has served as the model for states to emulate and led to equivalent executive orders issued by governors and/or statutes enacted by state legislatures.

Fifth, in 1980, two years after President Carter created FEMA to consolidate federal disaster related programs into one agency, FEMA established the State Assistance Program to fund the development of state floodplain management capability to assist communities in carrying out their requirements for participation in the NFIP. This program was necessitated by the lack of floodplain management capacity in many states throughout the country. According to Wright (2000), “State floodplain management capability to assist communities to interpret and utilize flood insurance study data and to enact and enforce required floodplain management measures did not exist in most states” (page 38). As discussed in later sections of this report, the State Assistance Program has evolved into the current Community Assistance Program that funds states to assist local communities and has set the precedent of federal funding of many state floodplain management activities.

The 1982 assessment of state floodplain management previously mentioned was conducted by the ASFPM, as part of Jon Kusler’s “Regulation of Flood Hazard Areas” study which he completed for the WRC as part of its charge to conduct research on floods and to prepare written reports regarding intergovernmental relationships in a unified national program for floodplain management (Bloomgren 1982). A limited survey consisting of at least the

⁷ An Executive Order (EO) has the force of law and may be issued by a President or Governor. EOs are typically based on existing authority and do not require additional action by a legislative body to be effective.

following seven topics⁸ was completed by each of the state coordinators of the NFIP: 1) number of communities subject to flooding; 2) local enabling authority; 3) existing state floodplain management; 4) state floodplain management activities; 5) problems; 6) innovations; and 7) selected state floodplain management publications.

There were four findings of note in the 1982 assessment. First, there were at that time 27 states that had adopted state statutes regulating the floodplain or established standards for local regulation. Second, implementation of state programs that were now on the books were impeded by “inadequate enabling authority, inadequate funding, poor flood data, public apathy and lack of intergovernmental coordination” (Bloomgren 1982:17). Third, many state programs were only partially effective. According to Bloomgren (1982), “program success is hampered by fragmented floodplain management powers, lack of clear floodplain management goals, inadequate funding and staffing, exemptions, inadequate control of public uses, inadequate maps and lack of public awareness” (page 37). Fourth, there were expectations that activities funded through the newly created State Assistance Program would expand and improve state floodplain management capabilities. Bloomgren (1982:28-30) divided activities initially funded through the State Assistance Program mentioned by survey respondents into the following five categories:

1. training and education of local community leaders;
2. development and/or distribution of promotional and informational materials used for training and education;
3. technical assistance to local governments;
4. flood hazard mitigation programs; and
5. legislative/regulatory analysis to determine what changes need to be made to strengthen floodplain management.

Based on a qualitative analysis of the responses, Bloomgren (1982) listed ten elements “found in the more effective state programs” (page xi). These were:

1. a lead agency – a single location with experts in floodplain management that should have, at a minimum, the “authority to coordinate activities, provide technical assistance and education and establish standards;”
2. adequate funding;
3. expert staff;

⁸ Bloomgren did not include a copy of the survey instrument. The topics listed are those in her tables that were created to organize the responses for each state and do not likely reflect the actual questions or all the questions asked each respondent, some of which were mentioned in the text. She also noted that “Not all states were able, in the short time available, to provide specific details on staff and budget” (Bloomgren 1982:55).

4. Regulation of private uses of the floodplain;
5. Supplementary statutory authority to do such things as acquiring flood-prone structures, operating flood warning systems, and developing flood hazard mitigation plans;
6. Rules – having adequate administrative regulations to carry out statutes;
7. Mapping and data gathering capacity;
8. Technical assistance provided to communities;
9. Educational support for all involved with floodplain activities; and
10. Planning responsibilities before and after floods.

Because most states did not possess these elements, Bloomgren included recommendations for their development, most of which relied on the federal government to support greater state involvement in floodplain management and to provide the necessary funding or other assistance for states to upgrade their capabilities.

In 1985, Burby, French and their colleagues published the results of a national assessment of the effectiveness of flood plain land use management based on the quantitative analysis of returned mail surveys from over 2,500 knowledgeable local, regional, and state officials. As part of their analysis, the investigators evaluated the role of states and how their programs affected local flood plain management programs. When state officials were asked to list their two most important roles, “planning and coordination” was included in 90% of the responses and “technical assistance to local governments” was included in 86% of the responses. Only two other roles were listed on more than 10% of the responses: “public information/flood warning” (56%) and “regulation of flood hazard areas” (52%). When asked what two roles they were most involved in, five were listed on 38% or more responses: “technical assistance to local governments” (74%), “planning and coordination” (68%), “post-disaster assistance” (66%), “public information/flood warning” (56%), and “regulation of flood hazard areas” (38%). These results coincide with Bloomgren’s. State functions were limited and important roles were those that were funded by the State Assistance Program.

To understand how effective state roles are, Burby, French and their colleagues asked local officials to relate their experiences with state programs. They found that “a majority of local government officials (52 percent) ... were not familiar with their state’s flood hazard mitigation programs. Of those that claimed to know something about their state’s program, only 11 percent reported they were very familiar with state efforts in this area” (Burby, French, et al. 1985, p. 124). Local officials were also asked about types of assistance they received from their state between 1978 and 1983. The investigators stated that “The successful efforts of NFIP State Coordinators are clearly evident. A majority of local governments reported receiving information about the NFIP from state sources (53 percent) and almost a majority (49 percent) cited the state as their source for flood plain maps” (Burby, French, et al. 1985, p. 125).

Burby, French et al. (1985) finally conducted a multiple regression analysis “to determine the effect of state programs on the scope and implementation of local programs” (page 127). They found that “state flood hazard management programs are instrumental in stimulating local programs to protect property and preserve the environment, and they are instrumental in increasing the local administrative priority of flood hazard management” (p. 127 and 133).

The state of floodplain management in the mid-1980s was summarized in the 1986 publication, *A Unified National Program for Floodplain Management*, written by the Interagency Task Force on Floodplain Management. It confirmed that states were then developing the necessary capabilities to provide local governments with information and assistance to implement the NFIP. “Especially since the mid 1970s, State capability to carry out floodplain management activity has expanded and now many states have vigorous and comprehensive floodplain management programs” (Interagency Task Force on Floodplain Management 1986, p.VII-7).

L. R. Johnston Associates (1992), in its assessment of floodplain management in the United States, summarized the development of floodplain management in the 1970s and 1980s. The 1970s were characterized as a decade for states to become involved with floodplain management and the 1980s as a decade for state floodplain management programs to evolve. “During the 1980s, the significant ‘new’ legislative or institutional changes were few. Rather, more attention was given to implementing policies and programs. The federal government took on more of a coordinative role, providing direction and technical assistance. State and local governments gradually increased their role in fashioning floodplain management strategies appropriate to their jurisdictions” (L. R. Johnston Associates 1992, Chapter 4 p.11).

By 1990, the basic state role in the NFIP, assisting local communities comply with federal directives, had been established, and the majority of states had enacted floodplain management statutes (ASFPM 1992 and L. R. Johnston 1992). As a consequence, state floodplain management capabilities had begun to expand to provide local communities with the necessary information and skills to carry out the mandatory activities of the state and federal programs. The ASFPM also noted in its 1992 survey of state and local programs in floodplain management that recent activities initiated by several states since its first survey in 1989—certification in floodplain management, establishing state or regional floodplain management associations, publishing newsletters, and training building inspectors in floodplain management—were fostering professionalism in floodplain management (ASFPM 1992). In essence, states had become critical partners in the unified national floodplain management program, something first envisioned by the WRC in 1968.

The state role in floodplain management has expanded greatly since L. R. Johnston’s assessment in 1992. Two important developments were partially responsible. First, the implementation of the CRS has provided the incentive for states to further increase their floodplain management capacities. When states have the responsibility to train local officials and provide information on activities that exceed NFIP minimums, state personnel must be knowledgeable in these areas first and are forced to develop innovative programs that meet local conditions. Bosselman and Callies (1971) describe the problems that a program like the CRS overcomes in the NFIP:

“Any complex system of regulation has a natural tendency to reduce innovation. Minima become maxima. When regulators approve one design it creates a powerful incentive for other[s]...to use the same approach” (p. 319).

This certainly was the case with the NFIP, which could have limited states to assisting communities implement minimum land use and building code requirements. To achieve CRS goals, state and federal officials have to encourage communities to go beyond the minimum and integrate floodplain management principles into all their development decisions.

Second, in 1999, the ASFPM initiated its Certified Floodplain Manager (CFM) Program. According to the ASFPM (2003b), the goals of this program are to “(1) advance the knowledge of floodplain managers, (2) enhance the profession of floodplain management, and (3) provide a common basis for understanding floods and flood loss reduction approaches” (p. 3). As more people are certified, over 3,300 by 2006⁹, states adopt, support, and implement new ideas and innovations developed and advocated by state floodplain management practitioners. Consequently, state floodplain managers are moving toward the leading edge of advancements in the professional field of floodplain management and becoming less dependent on the federal government for program development. The CFM program’s continuing education requirement will ensure that state floodplain managers remain at the forefront of their profession. In recognition of the value of the CFM program in improving community compliance, FEMA and other federal agencies have provided funding support for the establishment and operation of the CFM program. FEMA officials sit on ASFPM’s CFM Board of Regents to coordinate the CFM program with FEMA’s training initiatives.

The advances in state floodplain management during the 1990s led the ASFPM to create its *Effective State Floodplain Management Programs* document in 2003. It was not intended to provide a “one-size-fits-all” program for states to emulate. Rather, it presents ten principles that underlie program components states should employ to manage floodplains incorporating local conditions. The following ten principles were presented as components of an effective program:

1. State floodplain management programs need strong, clear authority.
2. State floodplain management programs should be comprehensive and integrated with other state functions.
3. Flood hazards within the states must be identified and the flood risks assessed.
4. Natural floodplain functions and resources need to be respected.
5. Development within the state must be guided away from flood-prone areas; adverse impacts of development both inside and outside the floodplain must be minimized.
6. Flood mitigation and recovery strategies should be in place throughout the state.

⁹ ASFPM web site, August 2006, www.floods.org/TheOrganization/offrpt.asp

7. The state's people need to be informed about flood hazards and mitigation options.
8. Training and technical assistance in floodplain management need to be available to the state's communities.
9. The levels of funding and staffing for floodplain management should meet the demand within each state.
10. Evaluation of the effectiveness of states' floodplain management programs is essential and successes should be documented. (ASFPM 2003A).

The ten principles are not new. They are very similar to those presented by Bloomgren (1982) twenty years earlier and contain many of the components of excellent programs found by Morse (1962) forty years earlier. What the three lists have in common is their focus on conditions within states that support the implementation of floodplain management programs rather than their technical content, which changes over time as technology advances, or local conditions, which vary within and between states.

1.3.3 The Current Situation¹⁰

All fifty states participate in the NFIP and the Community Assistance Program –State Support Services Element (CAP-SSSE). By agreeing to participate in these programs, states must adopt certain roles specified in the Code of Federal Regulations and the annual Guidances to the CAP-SSSE respectively. However, states are also encouraged to develop program elements that meet their specific needs. Therefore, state programs will share many characteristics but will also exhibit unique elements. The following discussion begins with a description of program requirements that essentially provide the minimum components of state floodplain management programs and is followed by an analysis of state programs to determine to what extent states achieve federal minimum requirements and also develop and implement additional tasks.

When states join the NFIP, they take on two separate roles, both of which require the adoption of certain programs and policies. First, like local governments states are considered “communities” and must adopt adequate floodplain management regulations that at least meet NFIP minimum requirements (44 CFR 60.11 to 60.13). States must “comply with the flood plain management requirements of all local communities participating in the program in which State-owned properties are located” or establish appropriate regulations for state-owned property in non-participating local communities. They must also purchase Standard Flood Insurance Policies for state-owned structures or their contents.

¹⁰ This section is based on an analysis of information included in the current Code of Federal Regulations (CFR), Guidance provided to states for the Community Assistance Program – State Support Services Element (CAP-SSSE) for FY 2005 and FY 2006; forty-nine state Floodplain Management Work Plans required for states participating in the CAP – SSSE program composed in either 2004 or 2005, there being one for each state except Pennsylvania, which has not filed a work plan as of the writing of this report; and ASFPM 2003a, 2004a, and 2004b.

Second, state agencies designated as “State Coordinating Agencies” must perform certain duties in this role to guide and upgrade local government capabilities to meet NFIP program requirements. Appendix 1 contains the sections of 44 CFR which pertain to the state role. To summarize, Subsection 60.25 outlines state responsibilities under the general umbrella of “demonstrating a commitment to the floodplain management criteria” by: **enabling** local communities to regulate development; **guiding** communities in ordinance administration; **informing** local government and the public about floodplain management requirements; providing **floodplain mapping assistance**; **notifying FEMA** of local compliance issues; **regulating** to prevent environmental and water pollution during floods; **coordinating** state floodplain management activities; and **training**.

As can be discerned from the above list of responsibilities, FEMA has recognized that many issues are appropriately dealt with at the state level of government and then the agency has encouraged and mandated states to create and develop state floodplain management programs that incorporate mechanisms ensuring effective implementation at both the state and local levels. FEMA initially took action to assist states, including persuading and then mandating governors to designate NFIP State Coordinators and detailed roles for those State Coordinators. The agency worked with states to ensure they had adequate enabling legislation for communities, and allowed more restrictive state and local requirements. By the late 1970s, FEMA ensured that states had adopted compliant regulations either to be “self-insured” or to become NFIP communities.

From 1981 to 1985, the agency funded state programs through the State Assistance Program (SAP) to build state capability. At that point, the FEMA program changed to the Community Assistance Program (CAP) in which the FEMA Regions reach an agreement with each state to supplement Regional resources in performing NFIP activities. Essentially, the states are treated as contractors to perform NFIP functions, with what some officials characterize as little effort to build state capability.

While federal statutes do not provide advice on how to achieve specified activities, guidance from FEMA to states that elect to participate in the CAP-SSSE program specifies eligible activities and requirements they must or should perform. For fiscal year 2005, FEMA (2005) listed eleven categories of eligible activities and requirements, included in Appendix 2. States are required to conduct Community Assistance Visits and Community Assistance Contacts, to help communities develop and adopt appropriate floodplain management ordinances, and to play a significant role in the Map Modernization program. They are encouraged to provide technical and other assistance to communities and individuals. To meet the demands of CAP-SSSE, FEMA (2006) encouraged states “to have at least one full time person dedicated to CAP-SSSE or other floodplain management activities to help maintain this expertise and capability” (p. 6). Under the State Assistance Program in the 1980s, states were required to have one full-time, state-funded position in order to be eligible for NFIP cost sharing funds. This incentive process increased state capability because it required a commitment on the part of state decision makers, such as the governor and legislature.

An examination of the extent to which states engage in the activities specified in the NFIP and CAP-SSSE program requirements can be found in the most recent ASFPM survey of floodplain management program coordinators (ASFPM 2004a). “State floodplain management

programs devote time to at least nine categories of activities” (p. 4). As shown in Table 4 below¹¹, in 2003, state floodplain management staffs spent 42% of their time on average in training and education, 16% monitoring local programs, 6% working on local ordinances, 9% on administration, and about 25% on other activities. Comparing this work breakdown to the elements of the CAP-SSSE program, it appears that much more time was devoted to recommended activities rather than to requirements.¹²

Because the ASFPM survey was conducted prior to the issuance of the first guidance for FY 2004, states were allocating resources according to their program needs. When new demands of the CAP-SSSE were added to ongoing state demands, it was likely that combined demands might exceed the available state staff resources of many states. In fact, 75% of the NFIP State Coordinators reported in their 2004 or 2005 state floodplain management plans that the costs of planned activities were higher than expected funding.¹³

In its evaluation of what constitutes an effective state program, ASFPM (2003a) specified one of its ten guiding principles as “the levels of funding and staffing for floodplain management should meet the demand within each state” (p. 88). The Association further noted that a state program, no matter how well designed it is, cannot function properly if it lacks the resources to do so.

¹¹ This table is taken from ASFPM 2004a, page 4. As noted there, the percentages do not total 100% because of rounding and the inclusion of other activities listed by state program coordinators.

¹² It is not clear how much time each activity should take, so one should not read into this observation any more than states actually spent their time differently than what FEMA’s list would suggest.

¹³ 49 states, all but Pennsylvania, have produced state floodplain management plans. Of these, 45 included an evaluation of the “gap” between planned funding needs and available funds, and 36 of the 45 projected that there would be insufficient funds to meet all the funding needs.

TABLE 4: Average Staff Time Spent on Floodplain Management Activities

Floodplain management activities conducted by state staff	Average percentage of state staff's time
Technical assistance to local governments	21%
Monitoring local floodplain management programs	16%
Educating and training of local officials and other professionals	14%
Administering grant programs (state and federal)	9%
Mapping flood hazards or conducting engineering activities or support	8%
Providing technical assistance to property owners	7%
Helping with enforcement of local floodplain management ordinances	6%
State-level enforcement	3%
Promoting the sale of flood insurance	2%

A determination as to whether state floodplain management programs are properly funded and staffed can be estimated using self-reported information in Table 2 of the 2003 ASFPM survey of NFIP State Coordinators (ASFPM 2004a) reporting salaries and fringe in state floodplain management program annual budgets and data collected from several sources shown in Table 5 below for variables that have been identified by Morse (1962), Bloomgren (1982) and ASFPM (2003a) as being critical in discriminating between effective and ineffective state programs. To evaluate funding levels, salary data in Table 2 of ASPPM 2003a were used. They indicate that 73% (36 of 49) of the states received 50% or more of the total for salary and fringe from the Community Assistance Program (CAP) and 57% (28 of 49) received 75% or more from the CAP. Thus, assuming the statutorily required 25% state match, the majority of states were relying solely on CAP for personnel expenses and in some cases for part or all of the state match. These 28 states were clearly under-funded if they attempted to pursue state activities not specifically authorized under CAP regulations or exceeded the capacity of their personnel in an effort to achieve CAP goals.¹⁴

If states are under-funded to accomplish floodplain management goals, then it is likely that they are also understaffed, an argument supported by NFIP State Coordinators in many recent state CAP-SSSE plans. Is there a way to determine if and which states are understaffed? Beginning with the findings by Murphy (1958), floodplain management research has consistently found that the difference between effective and ineffective state programs can be partially

¹⁴ This result is supported by the previously mentioned fact that the vast majority of NFIP coordinators thought their programs were underfunded to meet CAP-SSSE goals.

explained by the existence of statewide floodplain management regulations. Regulatory statutes typically require dedicated staff to carry out the statutory requirements and/or monitor their implementation. It follows then that the pursuit of both state and federal program goals is more likely to be related to larger staffs with the capacity to pursue and accomplish the combined set of goals. Using information on the scope of state statutes (those with and without regulatory statutes) and the number of personnel in state floodplain management offices displayed in Table 5 below, a t-test was performed to determine if staff size is directly related to the existence of state floodplain management regulatory statutes. The result shows that the difference between states with and without regulatory statutes is statistically significant at the 0.001 level. As can be seen in the raw data in Table 5, states with regulatory statutes have significantly more personnel in their floodplain management offices than those that do not. In fact, the raw data imply that the difference between states with and without regulatory statutes is having more than one person in the state floodplain manager's office.

Existing information concerning state programs is insufficient to conduct more detailed analyses than those described above. Survey results do not provide the contexts within which states operate, making it impossible to compare activities. In the next sections, hypotheses concerning state floodplain management capability based on previous knowledge and opinions of experts and information collected from several states to test their validity are presented.

Table 5 provides a summary of enabling legislation characteristics for each state, and the number of personnel currently in each state floodplain management office.

TABLE 5: State Floodplain Management Laws and Personnel

State	Dillon's Rule or Home Rule State ¹	State Planning Mandate ²	Executive Order By Governor – Floodplain Management ³	State Statutes Pertaining to Floodplain Management ⁴	Scope of State Statutes Pertaining to Floodplain Management ⁵	Number of Personnel in State Floodplain Management Office ⁶
Alabama	Dillon – Some	None	Yes	No	Inconclusive	4.5
Alaska	Home Rule	General	Yes	No	Inconclusive	1.25
Arizona	Dillon – All	Complete	Yes	Yes	Enabling	0
Arkansas	Dillon – All	None	No	Yes	Enabling	2
California	Dillon – Some	Complete	Yes	Yes	Regulatory	10
Colorado	Dillon – Some	Complete	Yes	Yes	Regulatory	5
Connecticut	Dillon – All	None	Yes	Yes	Regulatory	2
Delaware	Dillon – All	General	Yes	No	Inconclusive	3
Florida	Uncertain	Complete	Yes	Yes	Regulatory	7
Georgia	Dillon – All	None	Yes	No	Inconclusive	2
Hawaii	Dillon – All	General	No	Yes	Regulatory	2
Idaho	Dillon – All	Complete	No – Yes	No – Yes	Enabling	1
Illinois	Dillon – Some	None	Yes	Yes	Regulatory	2
Indiana	Dillon – Some	None	Yes	(no mention) Yes	Regulatory	5
Iowa	Home Rule	None	(no response)	Yes	Regulatory	(no response)
Kansas	Dillon – Some	None	No	Yes	Regulatory	5
Kentucky	Dillon – All	General	Yes	Yes	Regulatory	11
Louisiana	Dillon – Some	None	Yes	Yes	Regulatory	4
Maine	Dillon – All	General	Yes	Yes	Enabling	3
Maryland	Dillon – All	Complete	No	Yes	Regulatory	2
Massachusetts	Home Rule	General	Yes	Yes	Regulatory	3
Michigan	Dillon – All	None	Yes	Yes	Regulatory	11
Minnesota	Dillon – All	None	Yes	Yes	Regulatory	9

State	Dillon's Rule or Home Rule State ¹	State Planning Mandate ²	Executive Order By Governor – Floodplain Management ³	State Statutes Pertaining to Floodplain Management ⁴	Scope of State Statutes Pertaining to Floodplain Management ⁵	Number of Personnel in State Floodplain Management Office ⁶
Mississippi	Dillon – All	None	Yes	No	Inconclusive	1
Missouri	Dillon – All	None	Yes	No	Inconclusive	6
Montana	Home Rule	None	No – Yes	Yes	Regulatory	1
Nebraska	Dillon – All	General	No	Yes	Regulatory	6.5
Nevada	Dillon – All	General	No - Yes	No	Inconclusive	1.3
New Hampshire	Dillon – All	None	No – Yes	No	Inconclusive	0.75
New Jersey	Home Rule	None	No	Yes	Regulatory	6
New Mexico	Home Rule	None	Yes	Yes	Enabling	1.5
New York	Dillon – All	None	Yes	Yes	Regulatory	4.75
North Carolina	Dillon – All	Complete	Yes	Yes	Regulatory	4.5
North Dakota	Dillon – All	None	Yes	Yes	Regulatory	2
Ohio	Home Rule	None	Yes	Yes	Regulatory	11
Oklahoma	Dillon – All	None	No	Yes	Regulatory	2
Oregon	Home Rule	Complete	No	Yes	Regulatory	1
Pennsylvania	Dillon – All	None	Yes	(no written plan)	Regulatory	2
Rhode Island	Dillon – All	General	No	(no mention)	Enabling	1
South Carolina	Home Rule	Complete	Yes	Yes	Inconclusive	3
South Dakota	Dillon – All	General	No	No (Yes)	Enabling	1
Tennessee	Dillon – Some	General	Yes	No (Yes)	Enabling	0
Texas	Dillon – All	None	No	Yes	Enabling	2
Utah	Home Rule	General	No – Yes	No	Inconclusive	1.25
Vermont	Dillon – All	None	Yes	No (Yes)	Enabling	1
Virginia	Dillon – All	General	Yes	Yes	Enabling	3
Washington	Dillon – All	General	Yes	Yes	Regulatory	7.5
West Virginia	Dillon – All	None	Yes	Yes	Enabling	1

State	Dillon's Rule or Home Rule State ¹	State Planning Mandate ²	Executive Order By Governor – Floodplain Management ³	State Statutes Pertaining to Floodplain Management ⁴	Scope of State Statutes Pertaining to Floodplain Management ⁵	Number of Personnel in State Floodplain Management Office ⁶
Wisconsin	Dillon – All	None	No	Yes (no citation)	Regulatory	9
Wyoming	Dillon – All	General	Yes	(no mention) No	Inconclusive	1.5

¹ Categorization taken from Richardson et al., 2003. Categories are “Dillon–All” for states in which Dillon’s Rule applies to all municipalities; “Dillon – Some” in which Dillon’s Rule applies to some but not all municipalities; “Home Rule” for states that shun Dillon’s Rule, and “Uncertain” states that have conflicting statutes making it unclear when Dillon’s Rule is used.

² Categorization taken from Table 2 in Burby (2003:6). The categories are “None” for states with no local government planning mandate; “General” for states requiring local governments prepare comprehensive plans but consideration of hazards optional; and “Complete” for states requiring states to prepare comprehensive plans and mandate consideration of natural hazards.

³ Categorization taken from Table A3 in ASFPM (2004:4). The categories are “Yes” for states with executive orders and “No” for states without executive orders. Also, there is a category “No-Yes” which represents the situation where there was a “No” in ASFPM (2004) but an executive order was mentioned in a CAP-SSSE 5-Year Plan prepared by the NFIP State Coordinator in either 2004 or 2005. Although not defined in either ASFPM (2004) or the CAP-SSSE 5-Year Plans, the executive orders generally identify the agency housing the NFIP State Coordinator and/or authorize state agencies to comply with NFIP requirements.

⁴ Categorization taken from section on State Authority included in CAP-SSSE 5-Year Plans submitted by NFIP coordinators in either 2004 or 2005. State statutes vary considerably from giving the municipalities the power to carry out floodplain management (often marked as “No-Yes”) to state requirements that municipalities have the option or are required to adopt items in state statute as (marked as “Yes”).

⁵ Categorization is based on descriptions of state statutes in CAP-SSSE 5-Year Plans and a reading of state statutes on the Internet. “Enabling” refers to states with statutes that authorize local governments to develop and enforce floodplain management land use and zoning ordinances. State agencies are typically assigned to assist local communities. “Regulatory” refers to states with statutes that mandate local participation in the NFIP and/or are more stringent than NFIP minimum regulations, and/or that may assign state agencies with certain floodplain management responsibilities.

⁶ The information for this column comes from ASFPM (2004b) Table A-9. Particularly in states with state floodplain management laws and regulations, some listed personnel may support the state’s program and are not necessarily doing work that directly supports the NFIP.

2. METHODOLOGY

Each of the fifty states participates in the NFIP, and each state has developed a singular floodplain management program. Over the course of the NFIP's history, or earlier for some states, programs have developed that reflect the circumstances of each state, including flood history, legislative priorities, political forces, and numerous local factors. Actions in support of floodplain management that have a beneficial effect in some states can be detrimental in others. Through interviews with experienced professionals in the field of floodplain management at the state and federal level, the study team was able to gain an initial, albeit subjective, understanding of the broad forces that influence the composition of state programs.

2.1 Hypotheses

The literature summarized in the Background above contains presentations of historical information and discussions about what constitutes an effective state floodplain management program. However, there have been no significant studies that have attempted to test which factors may be causally related to a strong and effective state floodplain management program that would be robust over time. Part of the explanation for a lack of these studies is that the state role is poorly defined by law and there are no standards to measure outcomes related to state programs that are partially integrated within a larger federal program, the NFIP, as well as potentially other federal programs and state legislative requirements. These characteristics make it difficult to compare easily the set of multiple, often unique, state floodplain management programs relative to the NFIP.

The study team thus developed hypotheses through consultation with experienced floodplain managers, leaders of the ASFPM, past and present FEMA officials, and other knowledgeable experts. This allowed the team to develop a set of potential expectations regarding causal factors that generate strength in a program, effectiveness, and an ability to maintain those characteristics over periods of time in which budget priorities, politics, and organizational charts shift. The team first held informal discussions individually with the experts, then formulated a long list of potential hypotheses. These hypotheses then were narrowed by the study team to ones that are testable given severe limitations on budget, resource constraints for data collection, and the available time to collect the information needed.

An interview guide was written that included questions to test the reduced hypothesis set. During and following the interview process, problems arose that forced the study team to reduce the number of testable hypotheses. Among the problems were the lack of useful information gathered from the respondents and confusion among the respondents over what was being sought. The diversity of state programs was wider than originally expected, making many hypotheses irrelevant. Ultimately, the study team reduced its evaluation to seven hypotheses (presented below) for which sufficient data was collected from most, if not all, the states participating in the interviews.

Hypothesis 1: States that take responsibility for floodplain management and floodplain development beyond the federal requirements of the NFIP, achieve more successes in floodplain management than states that concentrate solely on the NFIP.

This hypothesis derives from Murphy (1958), Morse (1962), Bloomgren (1982) and most recently Effective State Programs (ASFPM 2003a) as well as interviews with numerous FEMA regional staff and ASFPM leaders. According to interviewees, the specific circumstances regarding a state's adoption and implementation of floodplain management legislation are thought to be significant factors in determining a state's level of activity in support of floodplain management objectives.

The timing of adoption is important. States that adopted regulatory measures governing development in identified flood-prone areas before the NFIP was implemented, for instance, are believed to have a significant history of guiding development away from those areas and may have fewer flood-prone structures as a result.

The nature of the adopted statutes, regulations or other guidelines is also significant. If a state only enacted an executive order for floodplain management in order to participate in the NFIP, then it is presumed that the state may have less than effective coordination among state agencies for floodplain management, low priority funding for floodplain management, and less emphasis on increasing local floodplain management capability.

In order to examine Hypothesis 1, states with floodplain management legislation and states lacking floodplain management legislation were included in the sample. Legislation on floodplain development guidelines (public and private) and the presence of an executive order were used as indicators of "taking responsibility." As shown in column six of Table 5, states may have one of two types of state floodplain management authority ("enabling" or "regulatory"), and states with each of these types of authority were selected for the protocol.

Hypothesis 2: State coordinators located within agencies with state regulatory functions are more effective than those in planning agencies or lower-level administrative departments in determining how state programs for floodplain management are implemented.

The NFIP regulations at 44 CFR (Appendix 1) allow great flexibility to states in determining which agency serves as the State Coordinating Agency for the NFIP. State agencies with regulatory functions, such as for water resource management, or the environment differ significantly from agencies with purely planning, assistance or infrastructure development-related (i.e., roads, bridges, hospitals, levees) goals. State coordinators are often housed in emergency management agencies; sometimes these departments are in agencies with regulatory functions and sometimes they are located in planning agencies. Similarly, employees of cabinet-level agencies versus administrative departments are subjected to different political influences and constancy.

If the agency housing the NFIP State Coordinator is a natural resource management agency, the resultant focus of the state's floodplain management program is expected to be on maintaining the natural and beneficial functions of the floodplain through regulatory and performance measures. If the agency housing the NFIP State Coordinator is a planning agency,

the focus of the state's floodplain management program will likely be community technical assistance. If the agency housing the NFIP State Coordinator is an emergency management agency, the focus of the state's floodplain management program will probably be mitigation projects, post-flood disaster assistance and integration with hazard mitigation functions.

Hypothesis 3: Lower personnel turnover in the agency in which the NFIP State Coordinator is housed results in stronger floodplain management programs.

State legislators and governors come and go, and with the transition, the NFIP Coordinator may transfer between agencies, or laterally within an agency, one or more times. Stability of an agency serving as the State Coordinating Agency and characteristics of the State Coordinators themselves (personality, time on the job, relative stature or rank, professional certifications) were suggested by our interviewees as factors that have significant influence over both the effectiveness of a state program and the prominence and importance of floodplain management within a state.

Hypothesis 4: Physical proximity to other related state agencies and programs increases the strength of a floodplain management program.

Experts consulted in the initial stages of this study believed that the physical location of offices and staff can have a significant influence on inter-agency and intra-agency communication. Physical location was hypothesized to influence who floodplain managers interact with on a regular basis and the availability of information on programs or projects that benefit from coordination with floodplain managers.

Hypothesis 5: Regionalization of floodplain management functions within states increases accessibility to local floodplain managers, improving the relationship between state and local programs.

Splitting state floodplain management responsibilities into regional offices statewide was thought to positively affect the relationships between the federal, state and local aspects of the NFIP. Some states divide responsibilities for such tasks as policing, emergency management, watershed management, and environmental monitoring as well as floodplain management across regions within a state. A sub-hypothesis that is related to hypotheses 4 and 5 is that co-locating regional staff for multiple responsibilities alongside regional staff from other projects with which the state program interacts also can improve other inter-agency purposes.

Hypothesis 6: Activities undertaken by sub-state regional regulatory and non-regulatory authorities complement state floodplain management programs, particularly if the agency responsible for floodplain management is unable to meet many of its responsibilities.

Sub-state authorities include a variety of agencies, departments, and other non-governmental organizations that may play a role in floodplain management. Examples include levee districts, river basin authorities, councils of government, flood control districts, and watershed districts. In some cases, these sub-state authorities are granted the authority to tax property owners to raise funds and implement their regulations. State associations of the ASFPM and state storm-water associations are also considered sub-state authorities for the purposes of

this report, although their charters are non-governmental in nature. It is postulated that one or more of these sub-state authorities will take on floodplain management tasks normally associated with the state floodplain management office when that office lacks the resources to meet its task requirements.

Hypothesis 7: The dependence of states on federal action hampers implementation of the NFIP.

A top-down control structure to floodplain management has developed haphazardly with FEMA at the top, states in the middle, and local communities at the bottom of the floodplain management hierarchy. Each party's perception of the hierarchy depends on position within the hierarchy. For instance, local NFIP officials stated in interviews that FEMA regional staff actively discourage locals from directly contacting the regions with policy questions or for technical assistance without going through the State NFIP Coordinator. FEMA maintains that they encourage local staff to contact the State Coordinator first, and that it's important for states be kept in the loop if the goals of CAP are to be achieved. State officials and others perceive some of FEMA's actions as intentionally maintaining hierarchical integrity, while FEMA perceives the hierarchy as a fundamental element under-girding program success.

Likewise, FEMA officials supposedly transmit information to communities through state officials, ensuring that the state serves as a clearinghouse for technical assistance to communities. Also, FEMA regions are supposed to enforce rigid reporting requirements as a condition of state funding each year. All of the work product associated with maintaining the federal-state-local hierarchy adds hours of work product that detract from time allotted to fulfilling technical assistance goals. Insufficient state personnel in some states make the reporting burdensome and decrease program effectiveness.

The hierarchical program structure has beneficial aspects and a proven purpose in that it provides an agency with oversight responsibility that is separate from the state and local politics traditionally governing floodplain management. An undesired aspect of the hierarchy may be an abdication of floodplain management responsibility by some states. FEMA officials have indicated they feel that the existing federal-state-local partnership may have resulted in some state officials believing that states no longer need to take responsibility for floodplain management. When this hypothesis was conceived, it was unclear whether the hierarchical relationships among FEMA, the states, and communities were universally pervasive or existed in only some FEMA regions. If pervasive, the hypothesis would be difficult to test because then one would not expect great variation across states.

2.2 Study Process

Following generation of the seven testable hypotheses, the study team proceeded to test them. The study process consists of three parts: 1) defining the research approach; 2) data gathering; and 3) analysis. Determining how to conduct the research task proved to be an involved task. The literature study presented in the Background section of this report demonstrated that states likely did not share a uniform approach to floodplain management nor were there any objective studies that investigated indicators of effectiveness or success. What did exist were subjective assessments and many self-reported program status reports completed by

NFIP State Coordinators that demonstrated that individual states have evolved differently and adopted their own approaches to floodplain management. To more fully understand state programs, it was decided to conduct intensive case studies.

To overcome the assessment shortcomings found in the literature, the study relied on interviews with FEMA officials and ASFPM leaders to provide determinations regarding states with successful programs versus those states that struggle to maintain and enforce programs to reduce flood damage. The study team used interviews with state officials to provide indicators regarding the inner-workings of agency decisions with regard to funding, legislation, and enforcement and more subjective measures regarding effectiveness of a program. Interviews with regional officials had to be viewed through the perspective of providing strengths of state programs relative to only the other programs within the region.

In summary, the study process included data gathering at several stages, development of an interview process for state officials, and analysis of state case studies. Because the team was limited by scope in the number of states it could interview, it purposively, rather than randomly, selected a sample of ten states to study in detail, as outlined in Section 3.2.2 below in order to attempt to have as much leverage with respect to the outlined hypotheses. Ten purposively selected states, representing 20-percent of the total, permitted testing the seven hypotheses and could be completed given time and budget constraints. Interview data and existing survey data together allowed development of a detailed case study for each state examined. Conclusions and recommendations followed the analyses of the case studies.

Data gathering consisted of three parts. First, the team examined and compared existing state program survey data and state characteristics (i.e., population, number of NFIP communities, number of NFIP state personnel). Second, the team reviewed the existing literature to describe additional factors that may play a part in defining the state role in floodplain management, both before the NFIP and since the program's implementation. Third, interviews with state officials were conducted to learn details concerning how states managed their floodplains. The information collected formed the basis of the case studies.

2.2.1 Interview Protocol

In order to gain the necessary understanding of state-level actions and interactions affecting floodplain management, the study team relied on an interview guide or interview protocol. The interview questions intended to collect a variety of objective and subjective, systematic and anecdotal evidence of factors that contribute to the evolution, structure, and effectiveness of state floodplain management programs. Each question was related to one or more hypotheses that were created before the interviews began. Questions were not designed to grade, rank, or evaluate the performance of any individual agencies, states or staff, and interviewees were so notified.

Table 6 provides an overview of the general themes and sample questions for the NFIP State Coordinator interview guide (Appendix 3). Interviews were primarily conducted via telephone, with email and other follow-up correspondence as necessary.

TABLE 6: Interview Themes and Sample Questions for NFIP State Coordinator

Interview Theme	Sample Questions
Background about the agency, department, and program	<ul style="list-style-type: none"> • How long has your program resided in this department/agency? Why was it located here? • Does your agency/department/program’s role in terms of reducing flood losses have any regulatory component? If so, what is the source of its authority? • What activities is your program doing that programs similar to yours in other states might not that directly or indirectly enhances the effectiveness of flood loss reduction in your state? • What tradeoffs for floodplain management are there in these programs being located in their respective agencies/departments in your state?
Information about floodplain management and mitigation	<ul style="list-style-type: none"> • Which agencies or programs are most central to preventing and mitigating flood losses in your state? • Are there any sub-state authorities, such as regional water districts, flood districts, or planning districts that affect floodplain management or floodplain regulation? • Why did the institutional arrangements in your state take this pattern?
Coordination with other agencies and groups	<ul style="list-style-type: none"> • With which other agencies or groups are you in contact about issues relevant to flood loss reduction or mitigation? • What interactions, if any, do you have regarding these issues with communities? • Are there any ways to improve coordination with other agencies or groups? • How helpful do you think additional coordination and interaction would be?
Development by state agencies	<ul style="list-style-type: none"> • Are there any state-imposed statutory or regulatory restrictions on what other state agencies can do in floodplains? • Is there a law requiring review of development by state agencies in the floodplain? By whom? • Do local jurisdictions have the responsibility for approving state- or federal-level developments? Do they feel they have real authority to deny or require changes before issuing a permit? • To what extent are state buildings and projects within the state compliant with NFIP or state regulatory requirements for floodplain management?
Recommendations for other states	<ul style="list-style-type: none"> • Do you think the current way hazards in floodplains are dealt with in your state is the appropriate approach? If so, why, and if not, how would you reorganize it? • Do you know of any laws, regulations, or activities in your state that may be models for other states in terms of floodplain management or vice versa? • Is there something specific missing in the authority of your program? What are the obstacles to obtaining additional authority? • Some people talk about policy windows – time periods after a major flooding event, during which the public and legislature are concerned about flooding and during which changes are more likely. If you were to put together a package of recommendations for other states after a major flood event, what would you include?

The initial set of questions and issues underwent review, revision, and analysis based on pilot interviews with state officials in Louisiana in February 2005. No interviewee was asked all the questions in the interview protocol, the questions for each interview were specifically chosen to match the expertise of the interviewee. Interviewees were informed prior to the interview that the questions would involve discussions of their organization’s role; their coordination with other state agencies, sub-state regional entities, and FEMA; and brainstorming about any other ideas they may have to improve the overall system of state-level implementation of the NFIP.

The twenty-six interviews associated with this study report were conducted with selected officials between February 2005 and June 2005. In each state, interviews were conducted with the NFIP State Coordinator when available. Based on staff availability, additional interviews were conducted with State Hazard Mitigation Officers, local community floodplain

administrators, or other state agency representatives. With the exception of official policy, no responses or opinions are reported herein that identify individual respondents.

In addition to the interviews conducted specifically for this study report, information was also drawn from interviews conducted for the related report entitled, *Evaluation of the National Flood Insurance Program: An Evaluation of Compliance with the National Flood Insurance Program Part A: Achieving Community Compliance* (hereafter “Compliance Study”) (Monday *et al.* 2006). Table 7 provides a summary of the interviews either conducted or reviewed in preparation of the case studies.

TABLE 7. Summary of Interviews Conducted or Reviewed

State	Number of Persons Interviewed for <i>State Roles and Responsibilities</i>	Number of Persons Interviewed for <i>Compliance Study and Reviewed for State Roles and Responsibilities</i>
Arizona	≥5	≥5
California	≥5	≥5
Florida	<5	0
Louisiana	≥5	≥5
Maine	<5	0
Missouri	<5	0
North Carolina	<5	0
Texas	<5	≥10
Washington	<5	≥5
Wisconsin	<5	0

2.2.2 Characteristics of States and Reasons for Selection

The team chose ten states to investigate in detail to test the validity of the hypotheses. States were purposively chosen in order to provide variance along the primary factors of interest, including: effectiveness of floodplain management programs; strength and formality of the legal and institutional foundations of the program; and types of agencies housing the program. Because floodplain management needs vary so greatly across the country, several secondary factors also played a role in the selection of states, including:

- existence of coastal hazards;
- number of NFIP communities per state NFIP staff;
- FEMA region—ensuring some geographic distribution;
- longevity of the state coordinating agency and agency structure; and
- number of declared disasters and repetitive flood losses as an indication of flood history or disaster management experience and need.

In addition to these variables, states were considered according to their flood risks as characterized by the number of disaster declarations, amount of land in the Special Flood Hazard Area (SFHA), and estimated number of structures in the SFHA. Rank orders for the states on

each of these three variables were then created and the states at the bottom of each of the ranked lists were excluded from consideration. For example, Nevada was dropped from consideration because it had a low of two percent of its total land area designated as SFHA, and also it had only 13 declared disasters as of December 2003.

Given the number of relevant factors and variance across states, there was no clear algorithm to solve for the best set of states to choose for the sample. Therefore expert opinion about what states were most likely to make up a representative sample was taken into account. Table 8 summarizes the factors considered in the selection of states. The states ultimately selected in the sample include (in alphabetical order): Arizona, California, Florida, Louisiana, Maine, Missouri, North Carolina, Texas, Washington, and Wisconsin.

As shown in Table 8, states with a wide variety of State Coordinating Agency types were included in the study, including agencies with responsibility for: water resources (2 states), emergency management (3), natural resources/ecology (3), planning (1), and transportation (1). States with strong regulatory legislation (6), as well as states with enabling legislation (4) were sampled. The study team attempted to incorporate states with a variety of hazards in different parts of the nation by sampling states whose floodplains include coastal flood hazards (8) and states that do not (2), and examining states in nine of the ten FEMA regions. The number of participating NFIP communities and the number of staff employed by the state in floodplain management which determine the ratio of communities to staff was also taken into account when choosing states. Ratios ranged from a high of 486 communities to one staff member in Texas to a low of 37 communities to one staff member in Washington.¹⁵

¹⁵ Pennsylvania (1223 communities: one staff) and Hawaii (2 communities: one staff) represent the extreme ends of the ranked list of states based on staff ratios, and both outliers were excluded from further consideration based on this factor.

TABLE 8: Key State Characteristics Considered During Protocol Development

State	Primary Factors	Secondary Factors	Coastal Hazards	Number of NFIP Communities	Number of State Floodplain Management Staff	Ratio of Communities to State NFIP Staff	FEMA Regional Office	Declared Disasters between 1953 and 2003
Arizona	Water Resources	Enabling	No	97	1*	97:1	IX	17
California	Water Resources	Regulatory	Yes	509	10	51:1	IX	65
Florida	Emergency Management & Planning	Regulatory	Yes	417	7	60:1	IV	50
Louisiana	Transportation	Regulatory	Yes	286	4	72:1	VI	45
Maine	Planning	Enabling	Yes	945	4*	236:1	I	25
Missouri	Emergency Management	Inconclusive	No	539	6	90:1	VII	32
North Carolina	Emergency Management	Regulatory	Yes	395	4.5	88:1	IV	32
Texas	Natural Resource	Enabling	Yes	972	2	486:1	VI	75
Washington	Ecology	Regulatory	Yes	276	7.5	37:1	X	37
Wisconsin	Natural Resource	Regulatory	Yes	491	9	55:1	V	29

* This differs from Table 5 based on information obtained during the study process which is more current than ASFPM 2004b.

2.3 Limitations

The research methodology was designed to assess the current status of how states participate in the NFIP and whether they engage in activities that exceed NFIP minimums. Because of this focus, the roles of state legislatures in creating, reviewing, and amending state statutes and conducting oversight of executive agencies were not investigated. Clearly state legislatures play a crucial role in the creating and amending of floodplain management regulations, but past research (i.e., Rossi, et al., 1982) has shown that natural hazards issues including floodplain management seldom are salient enough to reach legislative agendas. Therefore, in most years, a state legislature would not conduct any hearings or consider any new legislation. As a consequence, any attempt to assess the actions of state legislatures would have necessitated a very detailed research effort to find supporters and opponents of greater regulation of floodplain management and instances of attempts, both successful and unsuccessful, to enact regulatory changes (Mittler, 1989). As described by Mittler (1998) in his study of the enactment of a state building code in South Carolina which took four legislative sessions or approximately eight years of dedicated work by one state senator, the law-making process can be both lengthy and complex.

The state budgetary process, starting with agency budget requests and ending with legislative appropriations, was also not investigated. In most states, the governor requests budget figures from agency heads, then adjusts the numbers, which typically exceed revenue forecasts, and publishes a proposed budget. The state legislature then holds hearings to review the proposed budget and makes changes as it sees fit. After passage, many governors have line item vetoes and can eliminate or sometimes reduce specific expenditures. Finally, the governor signs the budget bill, which appropriates the amounts accepted. NFIP appropriations are very small in comparison to overall state spending and would seldom be debated during any open budget hearings. There might only be a debate if an extremely uncommon proposal to dramatically raise or totally eliminate funding was put forth. Discussions of budgetary changes normally take place when agency heads first prepare budget requests, and these discussions, if they took place, should be picked up during the interview process of this study.

3. CASE STUDIES

3.1 Arizona

3.1.1 Program Overview and Effectiveness

The State of Arizona has 97 communities participating in the NFIP and a single staff person at the state level to administer the state aspects of the program. There are over 4,200 square miles of flood-prone land in the state, covering approximately 4-percent of the state's total land area. Taxes levied by county flood control districts supplement state and CAP funds to create well-funded local floodplain management programs, especially in highly-developed or rapidly-developing areas of the state. With the exception of tribal areas that have not adopted the NFIP maps, communities appear to maintain good compliance with NFIP standards, and local programs in Maricopa County and the cities of Prescott and Tucson excel. Interviewees postulated that experience with devastating floods, including major flooding in 1993 and 1999, have served to reinforce the importance of good floodplain management.

3.1.2 Legal Foundations

The state statutes at 48-3601 through 48-3628 describe the creation of county flood control districts, provide the districts the ability to levy taxes through property taxes, and enable the districts to regulate flood-prone lands. In general, the annual operating budgets of the flood control districts are far larger than the state NFIP program budget. The Maricopa County Flood Control District's budget, for example, includes revenues between \$60 - \$70 million received from a secondary property tax plus approximately \$1 million in licenses and other fees. Approximately \$10 million of this single flood control district's budget is allocated to personnel expenses. The technical capability and manpower of many of the county flood control districts therefore far exceed what the state offers.

According to state statutes, communities can choose whether they want to regulate their floodplains or relinquish regulation to the county flood control district. The state law requires all counties or communities to adopt two regulations that exceed NFIP minimum regulations: 1) elevation to the "regulatory flood elevation," which is defined as one foot above the base flood elevation; and, 2) the bottom structural frame of a manufactured home must be at or above the regulatory flood elevation. Flood control districts or public agencies that fail to adopt or enforce floodplain management regulations are not eligible for disaster relief. One interviewee indicated that although this requirement has resulted in 100-percent participation for communities with mapped SFHAs, the state does not have 100-percent community participation in the NFIP. As a result of the state statutes, every county in the state is also a Flood Control District. Each Flood Control District is then governed by the County's elected Board of Supervisors.

3.1.3 State Development in Floodplains

There is some confusion about whether the state has established effective means of requiring state agencies to adhere to local floodplain management ordinances. At the state level, Arizona has not adopted any specific statutes establishing floodplain management requirements

for development by state agencies. One interviewee mentioned that state agencies are expected to get local permits for development; however, another interviewee mentioned in contradiction that the state's regulations do not apply to state agencies. Arizona's Executive Order 77-6, Floodplain Management, however, requires that every state agency comply with local floodplain board regulations. According to one interviewee, there is a belief that each community has responsibility for ensuring that all construction, including state construction, is compliant with NFIP requirements, but several interviewees indicated inconsistencies regarding whether communities feel they have sufficient authority to deny approval of noncompliant state construction. State officials indicate that communities do feel empowered to deny permits, while local officials indicated that state statutes do not allow communities to alter or stop state projects.

Authorization from the flood control districts is required for development in watercourses; however, there are exceptions which are disturbing to some state officials because the exceptions do not appear to be compliant with NFIP minimum requirements. State statutes may be the cause of confusion among local officials regarding their ability to deny permits. Section 48-3613 authorizes several development activities in watercourses where written authorization is not required from the flood control district board and that the board may not prohibit the activity. The most egregious examples are the construction of bridges, culverts, dikes and other structures necessary for the construction of roadways, and certain kinds of dams. Officials from the Arizona Department of Transportation (ADOT) were quick to point out these exemptions during interviews. Although the flood control district board is directed to review and comment on these plans for construction, there is no mechanism for the county or the state to deny authorization to construct.

The statutory exemption for roadways has produced conflicts between the state floodplain management program and ADOT, with interviewees providing numerous examples of activities undertaken by ADOT that did not comply with NFIP minimum requirements. In recent years, an interim resolution has been reached as a result of new staff in the transportation department who are very well-versed in floodplain management. ADOT now focuses on reducing the flooding impacts of their projects, and designing projects to avoid negative floodplain impacts. But the "fix" is not binding, and may not survive administration changes, or other political forces. Some interviewees indicated that wholesale removal of the exemptions for transportation projects is not required, but that revision is necessary to permanently remove the existing impediments to full NFIP compliance. Interviewees indicated frustration that memorandums and agreements between the Federal Highway Administration and FEMA have not been used uniformly by states, and that modeling and mapping needs of the agencies are not at all consistent. The Conditional Letter of Map Revision process mandated by FEMA for some types of projects allows pre-approval significant proposed changes to flood conditions, but the process is time-consuming and can easily derail a project budget and timeline.

Other state agencies that state floodplain managers interact with on a regular basis include Dam Safety which is co-located with Floodplain Management in Arizona Department of Water Resources (ADWR), Arizona Department of Housing, and the Arizona Department of Environmental Quality. The Arizona State Land Department owns land in the state which, upon being sold for development, is used to support education. The latter department has an employee who is a member of the Arizona Floodplain Management Association (AFMA) in order to stay abreast of NFIP changes and safeguard the requirements during land transactions.

The ADWR State Standards Work Group was formed in 1990 to develop standards and provide technical assistance to promote consistent responsible floodplain management and watercourse use on a statewide basis. These standards are mandated by state law, as stated in A.R.S. § 48-3605(A), which states, “The director of water resources shall develop and adopt criteria for establishing the one-hundred year flood and delineating floodplains.” Funding for the State Standards program is obtained by voluntary donations from agencies and others who benefit from the State Standards.

The membership of the State Standards Work Group consists of representatives of the following agencies and organizations who donate their time and resources to support the goals of the group:

- ADWR, Flood Mitigation Section;
- two urban counties;
- two rural counties; and
- AFMA Technical Committee.

3.1.4 State Coordinating and Other Agencies Affecting Program

Upheaval in ADWR resulted in changes in the home-agency for the NFIP in recent years. Although the state statutes specify that ADWR is to house the NFIP State Coordinator, ADWR concluded in 2000 that the program was too expensive. The staff was cut by half and responsibility was transferred to the Department of Emergency and Military Affairs. The transfer was controversial, and not very successful. In 2003, disagreements among state agencies about which agency was in charge, and where to obtain matching funds led FEMA to withhold CAP funding. A new governor in 2003 shifted the responsibility back to ADWR, in accordance with the state statute, and refocused state priorities. Ongoing conflicts with FEMA over whether Community Assistance Visits (CAVs) can or should be conducted by the state or FEMA and conflicts over suspension of communities deemed in violation by the state may have led to frustration with the FEMA Regional staff. Interviewees indicated that there is inconsistent interpretation and application of NFIP requirements, including CAP contracts and enforcement of NFIP minimum requirements, according to a professional floodplain management consultant in the state.

Regarding the value of having the state’s floodplain management program housed in a water resources agency, one interviewee summed up the differing opinions about this issue stating that “it depends on who you ask.” There is a perception among state officials that the FEMA regional staff prefer the ADWR arrangement over an emergency management agency because ADWR is a regulatory agency with a compliance element and ADWR has technical staff, such as engineers and hydrologists, to help the director uphold the directives of the state statute. However, interviewees also indicated a general view that emergency managers are first responders, not floodplain managers.

3.1.5 Sub-State Authorities

The AFMA, established in 1982, was one of the first chapters of the ASFPM. General meetings are held twice per year, usually in May and November. Meeting locations rotate around the state in order to obtain understanding of local floodplain issues. The May meeting is held in the Central or Northern region, and the November meeting is held in the Southern or Central region. The first day is reserved for informative programs and training, and includes a variety of guest speakers. Committee meetings and reports and sometimes a field trip of local interest are held on the second day. A newsletter is published twice per year, prior to scheduled general meetings.

According to AFMA officials, the primary focus of the association is training, including a course on transportation design. Interviewees indicated that the association was originally founded as the education arm of ADWR, as the state budget and staff were limited. Without AFMA, many interviewed felt that the state's floodplain management program would be imperiled. According to one interviewee, several courses offered by AFMA have included a particularly effective tool at encouraging local floodplain manager involvement – floodplain permitting case studies. Given a variety of individual permitting questions to resolve, the officials jumped in and a lot of cross-training took place within workshop subgroups.

AFMA was instrumental in persuading the governor to return the NFIP State Coordinator's office to ADWR after the short-term move to the emergency management agency. Members expressed their concern with the emergency management agency's control of the function to the governor and legislature through a letter-writing campaign. The campaign was deemed a success. Interviewees indicated that coordination between the NFIP Coordinator's office and the association could be improved by sharing resources. For example, ADWR could use the association to work on policies that could be implemented at the state level. AFMA has two registered lobbyists with the state's legislative branch.

3.2 California

3.2.1 Program Overview and Effectiveness

In California state government, floodplain management is a large program of which NFIP coordination is a small element. The overall program is managed by the state floodplain management agency, but other important actors include the California Reclamation Board, numerous flood control districts, and the local communities, all of whom work with federal agencies involved in flood control projects. An explanation of each agency's role and known impacts on program effectiveness follows. Housed in the California Department of Water Resources (DWR), the state floodplain management program office consists of six full-time staff in the headquarters office, who devote approximately 75-percent of their time to NFIP-related tasks, and four district offices, each of which employs a regional coordinator for the NFIP. The offices represent Northern California, Central California, the San Joaquin Valley and Southern California. Regional office staff conduct CAVs and workshops and provide technical assistance to the communities, allowing the State Coordinator to focus more on policy issues.

California contributes significant funding to the NFIP state program, in addition to the required state match for the CAP contract. The state contributes 32-percent of a \$330,000 CAP contract, and supplements that with \$500,000 appropriated from the general fund and \$1 million in Proposition 13 funds¹⁶ to support additional workshops. The California Water Code, also known as the Costa-Machado Water Act of 2000, mandates a \$2.5 million appropriation for long-term floodplain mapping projects that includes unmapped areas with increasing development pressure. One interviewee credited the diplomatic skills of state floodplain management staff with securing such ample, targeted funding. State staff used their knowledge of the state’s history of flooding, diplomacy, and persuasion to successfully convince the legislature of the need for flood mitigation and mapping funds.

3.2.2 Legal Foundations

California’s Executive Order for Floodplain Management, B-39-77, was signed in 1977 in order to make the state eligible for participation in the NFIP. Although FEMA deemed the EO compliant at the time it was signed, FEMA notified Governor Pete Wilson in a letter dated July 28, 1995, that subsequent changes to the NFIP necessitated updates to the EO in order for the state to remain in good standing in the NFIP. DWR first prepared an updated EO in 1994. The revised EO has been reviewed by various agencies since that time, and was included in the *California Floodplain Management Report* (CFMTF 2002), which contains the recommendations of the California Floodplain Management Task Force. At the time of this report, the proposed revised EO had not been signed.

According to FEMA and several interviewees, the existing EO does not do enough to require state agencies to consider floodplain location in development decisions. In California, an Executive Order is interpreted as only applying to state agencies within the “executive family” and does not apply to constitutionally-established state entities, including the State Treasurer, California State Universities and Colleges, University of California, Superintendent of Public Instruction and the Public Utilities Commission. The proposed EO distinguishes between state agencies subject to its provisions, and those agencies not subject to its provisions, clarifying that the state can only encourage exempt agencies to comply and cannot force compliance. Compliance on the part of those agencies subject to the EO is also an ongoing concern, and the proposed revised EO specifically spells out how compliance can be increased in the course of state agency development.

3.2.3 State Development in Floodplains

Schools that do not meet NFIP minimum standards are a particularly troublesome consequence resulting from the inadequate provisions of the existing EO. Placement of school buildings is regulated locally by school districts and not by any specific agency at the state level. According to those interviewed, some school districts contend that they do not have to receive approval from a community for development. Portable classrooms have been identified as a specific problem, as there is currently no mechanism to prevent their placement in flood-prone

¹⁶ Proposition 13 in this case refers to funds from a \$2 billion bond authorized by California voters in 2000 to support safe drinking water, water quality, flood protection, and water reliability projects statewide.

areas. California floodplain management personnel have initiated several discussions regarding this trend with various state agencies, including the state architect, and FEMA, but a solution does not appear imminent.

3.2.4 State Coordinating and Other Agencies Affecting Program

The floodplain management section of DWR is very visible within the field of floodplain management in the state. Local government officials generally know the NFIP State Coordinator, and they know who to contact for specific information related to floodplain management. A representative of DWR is always present at the Floodplain Management Association¹⁷ (FMA) meetings. Email communication with local officials, and face to face contact with DWR staff at the regional offices has helped increase the level of comfort local officials have when questions arise.

The state convened a Floodplain Management Task Force and issued a report in 2002 that critiques the internal mechanisms that help and hinder the entire floodplain management program of the state. The general recommendations are broken down into three categories:

- better understanding of and reducing risks from reasonably foreseeable flooding;
- multi-objective management approach for floodplains; and
- local assistance, funding and legislation.

Recommendations are vague but include a revised EO, ensuring that the California Building Standards Code meets NFIP requirements, creating incentives to encourage coordination among various stakeholders in floodplain management, and reducing barriers to interagency multi-objective flood management projects.

Before conducting the case study, floodplain management experts considered California's program to be very effective. However, this opinion was not shared by one FEMA official that considered California's overall program for floodplain management weak and another FEMA official that agreed with this assessment and also noted that weaknesses could be the result of a hiring freeze at the state level. Within the state, numerous interviewees pointed to the EO and CAVs as sources of ongoing angst between FEMA and the state. Additional issues regarding communication and the partnership with FEMA Region IX are discussed below.

The approach to state floodplain management in DWR of dividing state floodplain management activity into regions largely is a result of the state's relative size as well as its history as an agency involved with water issues through sub-state regions. One consequence is that DWR is mainly staffed with engineers. According to an interviewee, there is frequent turnover of district office staff, approximately every three to five years, because floodplain management is a "dead-end job" for an engineer at the district level. The interviewee further indicated that a higher status within state hierarchy or the hiring of non-engineers may be

¹⁷ FMA is the state chapter of the ASFPM for California, Nevada and Hawaii.

necessary to avoid turnover and retain experienced technical employees regionally. Unfortunately, the NFIP State Coordinator is unable to influence hiring decisions at the district office level.

Despite the fact that District staff probably have more personal knowledge of the communities than the DWR staff at headquarters, interviewed California officials believe that their decentralized state floodplain management office arrangement might provide little benefit for other states thinking of adopting it. However, the opinion that the California model of decentralized staff would not work in other states was not strongly held, and the arrangement clearly provides a workable model for implementing a regionalized program.

Effective communication and a good working relationship between the California Office of Emergency Services and the floodplain managers in DWR appears to have waxed and waned over the history of the NFIP in California. According to one interviewee, interagency communication was better in the past primarily due to two factors: the efforts of a single individual, as well as the formation of a Floodplain Management Coordination Group. When that individual left, the group meetings have been less frequent and less productive. Several interviewees mentioned that moving the NFIP Coordinator to the Office of Emergency Services (OES) has been discussed, but none believed it to be a worthwhile suggestion because OES lacks the technical expertise of engineers and scientists needed for effective floodplain management.

One interviewee indicated that the placement of mitigation project management in OES initially altered state mitigation priorities, including insufficient attention to reducing repetitive loss structures. However, OES staff indicated that the agency is now committed to providing increased focus on other mitigation issues. Recently, the management of mitigation activities has moved higher in the agency from section to branch level, and new floodplain management staff are being brought in to fix the disconnect between mitigation and emergency management that has previously hampered agency actions. Much like Florida (discussed later), California OES has attempted to increase local community capability in applying for and using mitigation grant funds. State funds are being used to provide pre-disaster training to communities regarding the most effective uses for mitigation grant funds to prepare communities to apply for grants when funds become available.

The California Reclamation Board oversees flood control in the Central Valley of California. The Board designates floodways and regulates development but is not a partner in the administration of the NFIP provisions. Permit requirements for the Reclamation Board are supplementary to local floodplain management ordinance requirements. The Board's purpose is threefold:

- to control flooding along the Sacramento and San Joaquin Rivers and their tributaries in cooperation with the U.S. Army Corps of Engineers;
- to cooperate with various agencies of the federal, State and local governments in establishing, planning, constructing, operating, and maintaining flood control works; and,

- to maintain the integrity of the existing flood control system and designated floodways through the Board's regulatory authority by issuing permits for encroachments.

Board members are appointed by the governor, which one interviewee indicated may insulate the Board from political pressure and allow them to keep DWR “out of the line of fire.” One interviewee in March 2005 indicated that the lesson for other states could be to have someone besides civil servants making policy decisions. However, in September 2005 California Governor Arnold Schwarzenegger replaced all seven board members amid speculation that the board’s recent decisions to restrict urban development in flood-prone areas were too aggressive. Following the Governor’s decision, the board’s staff likewise left. The former board’s decision to review development behind former agricultural levees to determine if floodplain regulations were being adhered to was not well-received by developers (Weiser 2005). Political pressure to appease developers may have been the cause of the board’s replacement according to newspaper accounts.

3.2.5 Problems and Recommendations

FEMA Region IX monitors NFIP activities in California. The relationship between the region and the state is strained, with each party wanting and needing more from the other. The regional office divides community compliance responsibilities for California between eight people. These assignments rotate intermittently with personnel changes or when staff arranges to switch communities. FEMA Natural Hazard Program Specialists are assigned to work with the NFIP, but split their duties with other programs, including CRS, hurricane program, Flood Mitigation Assistance, repetitive loss programs, and response to disasters of many types. Frequent reassignments are confusing and frustrating for state and community NFIP officials.

One interviewee indicated that many FEMA Regional staff may not be adequately qualified for their many responsibilities. Several changes within FEMA were cited as causes. The region’s mentor program was discontinued, biennial conferences with all regional staff are no longer held, and policy papers from FEMA Headquarters have not been published in several years. The end result, according to several of those interviewed, is a lack of consistent guidance to states and communities from FEMA at the regional and national levels, as well as differing policy interpretations from different FEMA regions.

One state-level California interviewee indicated that state floodplain managers make a clear distinction between the state’s role versus FEMA Region IX’s role with regard to compliance, suggesting that the state be responsible for conducting CAVs and workshops and FEMA be solely responsible for compliance. State enforcement of NFIP provisions, the interviewee felt, would blur the line between compliance and communication or technical assistance. Some state personnel interviewed would like to see California leaders step up and take responsibility by enabling state floodplain managers to stringently enforce the NFIP, for both state and local development. Other state staff would like to see FEMA be more assertive in mandating compliance from communities after violations are identified in CAVs. CAVs have little “bite” when violations are identified and no action is taken by FEMA. In addition, despite affirmations from FEMA that the state is noncompliant with regard to the EO and state agency development, FEMA has not taken any action against the state to force compliance. State staff

indicated the need for a FEMA “hammer” to help them move their agenda forward with state lawmakers.

The self-perceived roles of FEMA regional staff and state staff are at odds in California, and neither party seems clear on the actions to be taken by each nor do they agree on the proper responsibilities for each party. For example, Region IX staff and California floodplain management staff collaborate annually to determine which communities will be subject to a CAV. FEMA recommends 70 to 80 communities, which includes a subset of about 10 communities where CAVs are required. California chooses about 40 additional CAV communities from the large, recommended set to conduct CAVs. However, state staff would like to provide more input to FEMA regarding the choice of recommended communities for CAVs. Another example of the conflicting roles involves violations. State staff also would like to see FEMA do more to handle compliance issues and violations, but one interviewee from FEMA indicated that the appropriate role for the FEMA Regional office is to only document rather than remedy violations. Another FEMA interviewee indicated the state coordinating agency has little incentive to pursue violations.

Regarding remedying violations, some FEMA Region IX staff perceive difficulty enlisting the support of headquarters to suspend a community. This perception, whether real or just suspected, may deter regional staff from conducting mandatory extensive follow-up on major violations because they are not convinced that enforcement actions will ultimately be imposed. Consistent policy enforcement from headquarters on this issue is important for program effectiveness at the FEMA region level. In some cases, it was alleged that political pressure from congressional members has removed the decision-making power from FEMA.

Several proposed recommendations for state level NFIP processes were offered during interviews with the numerous stakeholders in California’s system of floodplain management:

- require floodplain management plans for all NFIP participating communities. OES indicated that review of community multi-hazard plans has helped the agency focus on the priorities of the communities as well as the priorities of the state.
- add environmental review staff in every state agency to the Floodplain Management Association’s (FMA) mailing list. FMA is the state association chapter of ASFPM and is a multi-state association formed with Hawaii and Nevada.
- FEMA should develop a welcome packet for new community floodplain managers, available upon request by various parties. State NFIP staff have trouble learning of changes in local NFIP administrators, so a convenient method of identifying changes in local floodplain managers also was suggested.
- several FEMA Regional staff suggested contracting out CAVs to independent groups in addition to the states conducting CAVs through CAP, although state-level staff thought doing so threatens a state’s ability to generate long-term agency capacity.

- state-sponsored individualized training in floodplain management for each state agency would aid in overcoming deficiencies of the existing EO. DWR has successfully provided such training to the state's Department of Transportation, also known as CALTRANS.

Only some of these activities are ongoing in California. While the interviewees made recommendations for improving the overall program, they also mentioned several exceptional initiatives. For instance, California state floodplain management staff have been assertive in an oversight role advising communities to notify downstream communities about development actions upstream that may affect flooding. State staff also directly contact downstream communities personally, as necessary.

In addition to state-specific recommendations, several interviewees extended the scope of recommendations to the NFIP as a whole, indicating that pulling FEMA Regional staff from NFIP responsibilities to respond to disasters disrupts the day-to-day business of processing follow-up and technical assistance to states, communities, and property owners. This has been particularly relevant in California, where most of the regional FEMA staff has been diverted to respond to the large number of recent disasters in other parts of the country.

3.3. Florida

3.3.1 Program Overview and Effectiveness

Florida's program of floodplain management is closely aligned with the state's hazard mitigation program. Seven staff serve the state's 417 NFIP communities, producing a ratio of 60 communities to one staff member. Three staff focus primarily on hazard mitigation and flood mitigation projects, while four focus on NFIP community and state technical assistance and CAP. The state earmarks funds specifically to support the NFIP and hazard mitigation programs.

3.3.2 Legal Foundations

According to those interviewed, Florida's statutes regarding land use planning and floodplain management are broad in scope. Table 5, presented earlier, indicates ambiguity over whether Florida land use is governed by Dillon's rule, which reserves all powers not specifically authorized locally to the state, or home rule, and one interviewee reinforced that theme, saying "cities and counties have county and municipal *home rule* and they're *authorized* [by statute] to do various sundry things" (emphasis added). Only general purpose local governments have the ability to regulate land use in general in Florida, so the NFIP must be implemented by these units of government. Unlike Arizona, counties only regulate unincorporated areas. Regional governmental bodies, however, such as the five water management districts in Florida, derive specific authorities from state statutes and the state constitution. Certain aspects of the NFIP are regulated by water management districts (e.g., floodways), although these water management districts focus primarily on storm-water management and drainage issues on a watershed basis. The primary responsibility for compliance and floodplain ordinance enforcement remains with the cities and counties.

3.3.3 State Development in Floodplains

State officials distinguish sharply between activities of the NFIP state program that support state and regional entities, and those that support cities and counties. The state's NFIP program encompasses more activities than the minimum NFIP requirements and is funded by CAP-SSSE and funds allocated by the state. Interaction between state NFIP staff and other agencies is fairly common. Numerous state agencies are involved in private development review and state-owned construction, including the state floodplain management staff that participates in the review processes for both.

One interviewee indicated that all Florida state government projects are required to obtain local government building permits, similar to any private development. Most agencies, including the Florida Department of Transportation, require the job contractors to submit the plans for review and go through the steps necessary to gain approval. Local governments are empowered to review, comment, and deny applications for agency development based on the Florida Building Code. The same interviewee implied that issues related to zoning may be treated differently, but did not provide any further information.

The Florida Department of Environmental Protection (FDEP) is involved in all coastal construction and coastal zone management. State officials indicate that conflicts arise when FDEP performs flood studies using a different model than FEMA, but typically the FDEP model produces higher flood elevations, so major problems have, thus far, been avoided. FDEP also has a different definition of "substantial improvement" than the NFIP, and developers/homeowners reportedly become frustrated at having to revise plans approved by FDEP that are inconsistent with local floodplain management ordinances. There does not appear to be a formal method for resolving differences, but both programs are implemented on the local level meaning that local governments have become increasingly adept at advising developers/homeowners how to meet the requirements of both programs.

The Department of Health oversees onsite septic system placement and uses Flood Insurance Rate Maps for this purpose. When areas are mapped as approximate A zones, or appear to be wetlands but are not marked as special flood hazard areas, the Department of Health officials will often consult with state NFIP staff for assistance in tracking down the best available data. Interviewees indicated that state staff put considerable effort into assisting in these situations and providing an estimated base flood elevation for septic system placement.

DCA and state NFIP officials became involved with the formation of the Florida Building Commission beginning in about 2003. The Florida Building Commission is the group responsible for the statewide Florida Building Code. The original code became effective on March 1, 2002 and incorporates building, electric, plumbing, mechanical, and administrative codes—accessibility, energy, coastal, manufactured, and state agency codes. The code is updated annually.

According to one interviewee, FEMA Headquarters officials were not pleased when state NFIP officials asked the Building Commission to exclude NFIP requirements from the statewide building code. State officials had determined that a specific provision of the code which precluded communities from changing local ordinances more than once per year would

detrimentally affect communities wanting to become involved in the NFIP Community Rating System. Since the NFIP regulations stress the importance of a community taking action to reduce their specific flooding problems, such a statewide regulation would have been problematic for other reasons, as well. State NFIP officials were successful in excluding NFIP regulations from the code. The state feels that FEMA's objections to the seemingly pro-floodplain management measure may have alienated or confused officials affiliated with the Building Commission. Officials at FEMA Headquarters took the position that the advantages of having flood-resistant construction provisions in the state building code and improved enforcement statewide outweigh other concerns and that other changes to the state building code to accommodate the CRS may have been more appropriate.

3.3.4 State Coordinating and Other Agencies Affecting Program

Florida's State Assistance Office for the NFIP and Flood Mitigation Assistance (FMA) programs are headed by the same individual. The office is located in the Florida Division of Emergency Management, Bureau of Recovery and Mitigation. Emergency Management is located in the Florida Department of Community Affairs (DCA). DCA is primarily a land use planning entity with three divisions, including Division of Emergency Management, Division of Community Planning and Division of Housing and Community Development. In addition to coordination of emergency management, mitigation and flood insurance program issues, the agency is involved in growth management, housing issues and redevelopment.

The potentially blurred lines between the NFIP, FMA, and HMGP program administration in Florida have resulted in "very seamless, very informal, daily coordination" between staff persons involved in the three programs, according to interviewees. Staff are also co-located, increasing opportunities for collaboration on both small-scale and large-scale issues and projects. Streamlined processes for reviewing local hazard mitigation projects at the state level have emerged, effectively forcing communities to increase capability in devising projects, preparing analyses and submitting applications.

The frequency of recent hurricanes, state and federal funds for mitigation projects, and limited staff have necessitated shorter review times for proposed projects. Since staff can no longer spend hours working with communities to refine and correct their applications, the end result has been increased local capability; a positive outcome according to those interviewed.

3.3.5 Sub-State Authorities

Florida has a state-managed system of five Water Management Districts (WMDs): Northwest Florida, Suwannee River, St. John's River, Southwest Florida, and South Florida. FDEP manages the districts, which derive their authority from Chapter 373 of the Florida Statutes. The districts are authorized to administer flood protection programs and to perform technical investigations into water resources. The districts are also authorized to develop water management plans for water shortages in times of drought and to acquire and manage lands for water management purposes under the Save Our Rivers program. Regulatory programs delegated to the districts include programs to manage the consumptive use of water, aquifer recharge, well construction and surface water management. Interviewees pointed out that the WMDs are not general purpose local governments; they are extensions of the state with regulatory authority. As

a result of their reviews and permitting authorities, management of storm-water, aquifers and floodwaters is conducted on a regional basis.

The Florida Floodplain Managers Association is a chapter of the ASFPM, with the primary purpose of improving floodplain management in Florida by supporting comprehensive management of floodplains and related water resources. Their role is to foster communication, yet one interviewee indicated that the association does not appear to play a very active role in policy issues. Coordination among the association leadership and state NFIP officials is “probably pretty high,” as indicated by an interviewee, but “a problem is that the association does not have any full-time staff.”

3.4. Louisiana¹⁸

3.4.1 Program Overview and Effectiveness

Louisiana’s program of floodplain management is located within the state’s Department of Transportation and Development (DOTD). There are four personnel at the state level who implement the NFIP. DOTD has no regulatory authority with regard to floodplain management. Interviewees indicate that agency staff members view themselves as an extension of FEMA, conducting compliance monitoring and training for NFIP participating communities. State regulations do not exceed the minimum requirements of the NFIP, and the agency has no authority to require enforcement of NFIP minimum standards by communities.

3.4.2 State Development in Floodplains

Officials within DOTD stated that the role of the floodplain management program is not well understood by state agencies, and some agencies may not know the program exists. According to another state floodplain manager, the DOTD office is notified of state floodplain development during the planning stages, but they do not review plans and cannot stop work. The pre-notification system, also called a solicitation of opinion, is fairly good, according to some because it involves the floodplain management office, but the information provided to the developing agency is typically limited to floodplain maps and local permitting contact information. State floodplain managers did not know the conditions that trigger the solicitation of opinion and did not provide the statutory basis for the process.

The ability of communities to regulate floodplain development by state agencies is not well understood by state officials, including floodplain management officials. Development is the responsibility of each state agency, with no single agency overseeing all state development projects. Interviewees within DOTD indicated that communities do not have authority over highway projects, but do have authority over development by state universities. Officials believed that Facilities Planning in the Louisiana Department of Administration is supposed to contact local permit officials with regard to their development projects, but did not believe that the contact was actually occurring. Interviewees indicate that some staff of the Louisiana

¹⁸ Interviews with Louisiana officials were conducted in February 2005, prior to landfall of Hurricanes Katrina and Rita in summer and fall 2005.

Department of Economic Development may not be concerned about the impacts of development in the floodplain. Local officials interviewed as part of the Compliance Study (Monday *et al.* 2006) stated firmly that they do not know the flood-prone status of state buildings in their communities' floodplains because state buildings are exempt from the local permitting process. The level of coordination regarding state development in floodplains appears to be very low, with agencies tending toward self-regulation if there is any regulation.

The state floodplain managers interviewed did not have knowledge about state-owned buildings in the floodplains. The *State of Louisiana Hazard Mitigation Plan* (LSHMT 2005) identifies high-risk state buildings, and indicates that all state buildings are self-insured.

3.4.3 State Coordinating and Other Agencies Affecting Program

The Louisiana NFIP coordinating office for floodplain management has been housed within the Office of Public Works, DOTD since 1988. The transfer from the Department of Urban and Community Affairs (DUCA) to DOTD was mandated by Louisiana Senate Bill 1, First Extraordinary Session 1988, which also abolished DUCA and several other agencies, placing many programs in executive branch agencies under the control of the Governor. Interviewees indicated that an old Executive Order may have existed at some point prior to the 1988 reorganization, but it was allowed to expire when the 1988 bill codified the floodplain management responsibilities of DOTD. Copies of the old Executive Order were not provided.

DOTD is a large agency with 9 district offices and 14 agency divisions, and like some other states examined in this study, interviewees indicated that the floodplain management program is dwarfed by the agency's main focus on transportation. However, one interviewee disagreed with this assertion, indicating that the transportation function does not overshadow other functions of the department such as floodplain management. Some Office of Homeland Security and Emergency Preparedness (OHSEP) officials indicated that they believe the DOTD does not provide the necessary resources to the floodplain managers in order to do an effective job of implementing the NFIP in Louisiana, although state staff interviewed disagree with this assertion. One interview conducted with state staff after Hurricane Katrina indicated that the state program has conducted CAVs or CACs in each community in the past five to seven years, produced a 450-page desk reference on floodplain management for local communities, and received accolades from other FEMA Regions and Disaster Assistance Employees in the aftermath of the disaster. A DOTD interviewee indicated that the location within DOTD insulates the floodplain management program from budget cuts, more than other state agencies might experience. Since 1989, DOTD has been funded through a dedicated trust fund from gasoline taxes, resulting in few internal budget cut discussions overall.

Mitigation and floodplain management functions are housed in vastly different agencies, and interactions between the two agencies are difficult. State floodplain management officials have little coordination with OHSEP outside of the state's Hazard Mitigation Team, which was created by Executive Order KBB 2004. Because of differences between the two agencies, the team's actions are not necessarily consistent with the goals and objectives of the floodplain managers, although all hazard mitigation applications must include comments from DOTD, and OHSEP indicates that DOTD staff are a major component of the Hazard Mitigation Team. The team's members are all volunteers and must take vacation from their regular duties to attend

team meetings and functions. Yet the team meets monthly, and many team members have been participants for as long as ten years.

Because the Hazard Mitigation Team was created by Executive Order, the group is subject to political forces and changes of administration as demonstrated recently. The current governor cut the size of the team in half in order to reduce overall committee membership and streamline operations. One recent event, the deployment of National Guard personnel, many of whom worked in the mitigation areas of OHSEP, has negatively affected mitigation programs in the state. The deployment has resulted in a dearth of staff to handle mitigation project review and coordination.

Some floodplain management officials interviewed indicate that traditional hazard mitigation methods do not necessarily apply in their state because almost the entire state is flood-prone, and elevating structures does not necessarily remove people from harm in areas completely inundated by floodwaters. The interviewees indicate a bias toward structural flood control measures to relieve flooding, rather than purchasing or elevating flood-prone structures.

3.4.4 Sub-State Authorities

Several sub-state authorities assist with floodplain management in Louisiana. The Louisiana Floodplain Managers Association is perceived by those interviewed to be a good and growing group of professionals, which offers valuable workshops and training for local officials several times per year. There are approximately 20 levee districts, funded by the local tax base or the state, that are responsible for maintaining levees to the Corps of Engineers' standards. For example, the Amite River Basin was created in 1981 to resolve major regional flooding issues, and represents six parishes covering 2,000 square miles.

3.4.5 Problems and Ramifications

The state's relationship with the FEMA Regional office, with regard to CAP activities such as CAVs, is limited by the state's desire to use FEMA as the "tough cop", and maintain a positive relationship between the state and local communities. Interviewees indicate that state officials prefer that FEMA be wholly responsible for sanctioning communities that are noncompliant with the NFIP. State officials indicated that a recent probation action toward a local community resulted in other nearby communities calling the state to request a CAV. This outcome pleasantly surprised some state staff, but reinforced the idea that if FEMA remains the disciplinarian, the state can have a more pro-active approach in assisting communities in need.

Additional frustration is created by the CAP funding process and timeline which does not correspond with the state's budgeting process. FEMA offers the state money after the state budget has been finalized. But the state cannot accept FEMA money if it was not anticipated in the state budget. So the state has had to turn down opportunities for additional CAP funding. As a result, when the state requested the same pot of money that was offered in previous years, FEMA cut the funding request because the money had been turned down in the past. Officials from both OHSEP and DOTD indicate that the existing process of providing CAP funds directly to OHSEP rather than to DOTD and then requiring the state to disburse the funds from OHSEP to DOTD is a time-consuming bureaucratic hassle.

3.5 Maine

3.5.1 Program Overview and Effectiveness

NFIP program administration in Maine has benefited from the experience and longevity of the state's NFIP State Coordinator. In the same position for over 16 years, the coordinator has been housed in several agencies, been through multiple program changes, and guided Maine communities through hundreds of training opportunities. The state has four staff at present, comprised of the state coordinator and three planners. Three of four staff have been in their positions long-term, at least ten years, and interviewees revealed pride in the overall longevity of the program and staff.

3.5.2 Legal Foundations

Maine's floodplain management program derives its authority from the state Mandatory Shoreland Zoning Act, enacted in 1971. Every municipality must adopt a shoreline zoning ordinance, which regulates designated shoreline zones applying to every body of water—riverine and coastal—as well as to NFIP-designated SFHAs. The state's model ordinance includes all NFIP regulations. Floodplain management is designated as a task handled by local and regional governments and the state role is limited to providing technical assistance to the local governments. As such, the Maine Floodplain Management Program (MFMP) resides in the State Planning Office (SPO) with other agencies with similar roles.

3.5.3 State Development in Floodplains

Maine's state floodplain managers work with other state agencies to ensure that development is designed and built to reduce future flood damages. Maine requires that state dollars be treated like federal dollars with regard to flood-prone development and applies the process in Federal Executive Order (EO) 11988, Floodplain Management, to those actions. MFMP calls upon this authority to mandate a floodplain management review of Community Development Block Grant (CDBG) projects, Department of Commerce grant projects, and Army Corps of Engineers permits, for example. However, MFMP has no authority to require compliance with the executive order. Interviewees indicate that enforcement and implementation of EO 11988 in this manner at the state level was initiated by the NFIP State Coordinator. Currently, Maine's annual CAP-SSSE agreements include interagency review.

Other state permits are reviewed by MFMP under authority granted by Maine's Natural Resources Protection Act (NRPA) enacted in 1988. The NRPA recognizes the significance of specific natural resources and guides the state in preventing unreasonable impact to, degradation of or destruction of the resources and encourages their protection or enhancement. The Act applies to the following protected natural resources: coastal wetlands and sand dunes; freshwater wetlands; great ponds; rivers, streams and brooks; fragile mountain areas, and significant wildlife habitat. Projects implemented by the Maine Department of Environmental Protection (MDEP), Maine Department of Conservation and the Land Use Regulation Commission, Maine Department of Transportation and Maine Department of Inland Fisheries and Wildlife are required to be reviewed.

Review of state agency development in flood-prone areas varies across agencies. Interviewees indicate that the state's storm-water management and shoreland zoning laws may not be as effective as possible, due to a lack of enforcement staffing. MDEP's statutes, regulations, and programs focus on the man-made causes of storm-water capability reduction and water-body reduction. MDOT staff believe that their projects are not subject to municipal level review, but state MFMP staff continue to pursue a Memorandum of Understanding with the agency regarding flood-prone development. One interviewee insisted that despite specific issues with some agencies, Maine has made significant inroads on state development review for flood-prone development, especially for major developments.

3.5.4 State Coordinating and Other Agencies Affecting Program

In the organization chart, the MFMP is three levels below the SPO Director. Floodplain Management reports to Community Assistance who reports to the Director of Administrative Services, who reports to the State Planning Office Director. The SPO oversees development of comprehensive plans, map modernization projects, Coastal Zone Management, land use regulations, the NFIP, and the CRS programs. MFMP provides technical assistance and model floodplain ordinances to municipalities, which are responsible for enforcing NFIP building code standards. The requirement for every municipality to have a floodplain ordinance is not mandatory and 10-percent of all municipalities have not enacted local ordinances.

Training of state agency personnel and local community floodplain managers remains the primary focus of the MFMP. Interviewees indicate concern that a new state administration could change or weaken existing federal or state executive orders and statutes, which is why training other agencies in the importance of floodplain management is so important to state staff. About 25-percent of attendees at typical state-sponsored training events for floodplain management are local NFIP officials, while about 75-percent are state and federal agency staff. NFIP professionals, including lawyers, engineers, realtors, and neighborhood associations also take part in training opportunities.

Even though it is currently housed in the SPO, Maine's NFIP Coordinator's bureaucratic agency home changes frequently, "almost every time there is a new administration," according to one interviewee. The group has been housed in the Department of Economic and Community Development, in the State Planning Office several times, and in the Department of Civil Defense for a short time. The group has never been housed in a natural resources agency. The current planning agency host was selected as a result of the state's Growth Management Act, adopted in 1988. The act required communities to do a comprehensive plan, and all of the agencies that support plan development were co-located for the convenience of the communities.

Interviewees indicate that the office's current home works well and a move to an emergency management agency is not necessary, or would not necessarily be positive. One interviewee indicated that emergency managers tend to focus on monetary or project-funding aspects of floodplain management to the detriment of other more important program elements. One drawback of being in a planning agency, however, is the inability to stringently enforce specific NFIP regulations. The SPO currently has no regulatory authority or enforcement mechanism.

The relationship between MFMP and the Maine Emergency Management Agency (MEMA) has been strained at times, but significant progress is reported in recent years. Whereas state floodplain management staff used to be involved in mitigation project review and were regularly consulted on floodplain management topics, the level of coordination may have declined. For example, MFMP staff were not very involved in writing the State Hazard Mitigation Plan, and indicated frustration that outside state agency review, including SPO review, was rushed.

3.5.5 Sub-State Authorities

Maine does not have a state chapter of the ASFPM, but many state and local staff participate in the New England Association of Floodplain Managers and Storm-water Managers (NEFSMA). NEFSMA is not an official chapter of the ASFPM. Interviewees reveal benefits from grouping the floodplain managers and storm-water managers together in these associations, as the interactions result in better coordination on overlapping issues. Interviewees indicate that NEFSMA is not as strong as officials desire because communities in New England are small, with busy, under-paid staff. New England's geography also makes association activity more difficult.

3.5.6 Problems and Recommendations

Maine has successfully implemented a Code Officer Certification program, requiring all building code officers in the state to be certified. Each must attend regular training that includes the doctrines of floodplain management. Interviewees indicate that proof of success is revealed in the sophisticated level of flood-related questions from code officers. With high turnover in local code officials, the certification process and training in floodplain management have increased local capability. Communities have region-based interagency agreements as part of the code officer certification requirements. These agreements can be activated when a code officer leaves town or a new one comes on board. Code officers in other communities share work and mentor new officers.

Interviewees indicated several opportunities for increasing the working relationship between the NFIP State Coordinator's staff and the FEMA staff at Region I. The most important suggestion to come out of the interviews is for the FEMA Regional office to assign a single person to handle the state support elements of CAP-SSSE so that there is consistent advice, quick follow-up on compliance questions, and full attention given to issues of importance to the state NFIP staff. Interviewees indicate that some feel as though FEMA staff may not realize the importance of speaking with a single voice on important issues to communities, and the fact that dealing with multiple FEMA personnel on distinct issues (e.g., CAP, Map Modernization, HMGP, FMA) can be extremely frustrating when answers are not consistent. While a single person may not be able to adequately handle all aspects of all programs for a state, it may be feasible for a single person to serve as the state liaison and ensure that information going from FEMA to state staff is consistent.

Interviewees indicate a tendency for the hot issues at FEMA Headquarters to be the hot issues for FEMA Regional staff, when those issues may be of little importance to a particular state or community. One interviewee indicated that NFIP issues seemed to take a back seat to

FMA, HMGP, Project Impact, and Map Modernization as each program reached its own heyday. In fact, the states need assistance with mundane tasks like follow-up on community violations, tasks which Regional staff tend to assign lower priority, to the dismay of interviewees.

3.6 Missouri

3.6.1 Program Overview and Effectiveness

Currently, the state supports six full-time staff through its budgetary process and has 539 NFIP participating communities. The ratio of 89 communities to one staff member is perceived by state staff to be effective. Unlike state officials interviewed in other states, Missouri interviewees indicated little impetus to hire more floodplain management program staff if additional funds were to be made available. Interviews with state agency officials and others outside the floodplain management program indicate that the program staff have built strong relationships with local officials and other state agencies, demonstrate a high level of understanding with regard to NFIP requirements, and have an in-depth knowledge of Missouri's NFIP communities and the issues they face.

Missouri's Floodplain Management program experienced a clear window of opportunity for improvement when the state suffered severe flooding in 1993. Since that time, the state has purchased or assisted in the purchase of over 4,500 properties in the floodplain, and dramatically increased the number of state staff from one to six. The state also has stringently enforced open space requirements that together have had a significant effect on reducing the number of flood-prone properties. In more recent years, however, some of those interviewed believe there may be a shift in public perception regarding flooding, and mitigation funding may now be focused on mitigating other hazards such as earthquakes and tornadoes within the state. First, previously, 95- to 99-percent of all Missouri mitigation funding went to flood mitigation projects; now interviewees indicate the number has been drastically reduced. One interviewee also expressed concern that support for floodplain management in the legislature and among the public may be waning as people forget the severe floods. An example provided by that interviewee indicates that state matches for HMGP grants for local projects are no longer provided by the legislature and must be raised by local communities.

3.6.2 Legal Foundations

The state does not have building codes, requirements for local comprehensive planning, or state statutes regarding floodplain management. One interviewee indicated the belief that the state's role must therefore be as a facilitator or go-between for the communities, rather than as an NFIP enforcement mechanism. The interviewee further stated that with no authority to enforce NFIP requirements, the state cannot act as the enforcer and must rely on FEMA to perform this function.

In 2003, the Missouri Coalition for the Environment Foundation prepared a report entitled *Flooding Forgotten: The State of Missouri's Floodplain Management Ten Years after the 1993 Flood* (MCEF 2003). By pointing out the state's lack of legal and administrative infrastructure for floodplain management and comparing the state's program to seven other

Midwestern states, the report intended to persuade the Missouri General Assembly to enact appropriate legislation to reduce future flood losses. However, the comprehensive floodplain management program proposed in the report has not been successfully enacted by the legislature. The report's proposals included:

- assertion of state jurisdiction over floodplain development, including a permit program;
- a low flood elevation rise standard for floodway delineation and floodplain development permits;
- floodway development restrictions;
- strong technical oversight and assistance programs for local governments and the public; and
- a state-funded grant or loan program to facilitate pre-disaster, non-structural mitigation projects.

Interviewees indicate that Missouri Floodplain Management staff members also have tried unsuccessfully to get the General Assembly to enact specific regulations. Proposals have included codifying the state's Executive Order for state development (discussed below), requiring community variances be reviewed by the state, prohibiting development in the floodway, and enacting an insurance surcharge to fund mitigation. Even with help from the Missouri Floodplain and Storm-water Management Association in lobbying the legislature, the results have been disappointing.

3.6.3 State Development in Floodplains

Missouri Executive Order 98-03, signed by Governor Carnahan in 1998, requires that state agencies get a State Emergency Management Agency (SEMA) permit for development, thereby helping ensure compliance with NFIP minimum requirements that are spelled out in an attachment to the E.O. An engineer on staff at SEMA reviews each permit proposal, and upon approval, provides a copy to the local community to file for future CAVs. The E.O. does not have the force of law, and can be overturned easily. In addition, there is no mechanism for Floodplain Management to require state agencies to comply with the E.O. Several interviewees indicated that, despite these drawbacks, there is very little state development occurring in the floodplains and that the 1993 floods may have influenced state agencies to more carefully consider structure placement with regard to flood risk. Interviewees noted that the Missouri Office of Administration complies with NFIP requirements for new office structures through their Design and Construction branch, as does the Missouri Department of Transportation (MoDOT) through a Memorandum of Agreement with SEMA. MoDOT also provides technical assistance to various emergency management programs, including the mitigation staff.

3.6.4 State Coordinating and Other Agencies Affecting Program

According to interviewees, FEMA encouraged the state to move the NFIP Coordinator's office from the Department of Natural Resources (DNR) to SEMA after the 1993 floods. DNR was reportedly pleased with this arrangement, although interviewees acknowledge that one drawback is that DNR had more technical and engineering expertise in-house than SEMA.

The state's HMGP management was also moved to SEMA at the same time, resulting in a single agency for dispensing mitigation funds. As a result, there are no other agencies currently involved in mitigation project review. Some SEMA interviewees indicate that the close relationship among the NFIP and mitigation funding programs has been very beneficial, and that the NFIP aspects may actually bring more visibility to SEMA and other programs. Interviewees indicated very little conflict between agency functions, and a relatively seamless implementation of NFIP responsibilities through this emergency management agency.

3.6.5 Sub-State Authorities

The 19 Regional Planning Commissions (RPCs) in Missouri are established by statute and have quasi-state agency status. The commissions are funded by county and community governments, and each has a managing board. The smallest RPC represents three counties, while the largest represents ten. The RPCs have become active in floodplain management and hazard mitigation planning in recent years. This beneficial relationship developed when SEMA offered training to the RPCs to prepare hazard mitigation plans, recognizing that the groups could be contracted with for a massive statewide, cohesive hazard mitigation planning effort.

The results have been better than expected, with numerous communities adopting plans that are relatively consistent, in a relatively short time frame, and at significant cost savings over private contractors. Now, many of the RPCs are beginning to assist the floodplain management program with other aspects of NFIP work, such as training and workshops, providing technical assistance to communities in their jurisdictions (especially in cases of staff turnover), and helping make grant applications. Interviewees indicate that the state is pursuing additional roles for the RPCs with regard to floodplain management ordinance review, and trying to get permission from FEMA to allow RPCs to use grant administrative funds to help communities and SEMA close-out mitigation projects. FEMA has not been amenable to this idea.

The Missouri Floodplain and Storm-water Management Association has been instrumental in pursuing three main goals or activities, including: providing training and workshops, legislative lobbying, and acting as a liaison for local communities with SEMA. State employees cannot lobby the legislature, so the 300-member association takes on this role.

The association recently changed its name and expanded its name and purpose to include storm-water managers. The change resulted from member statements regarding a noticeable lack of communication between state staff of storm-water management programs and state staff of floodplain management programs. While those programs are integrally linked at the local level due to permitting requirements for individual projects, the state agencies dealing with each have very different goals. Interviewees indicate that the results of the name change and inclusive

invitations for membership have been positive, and have also resulted in streamlining of storm-water and floodplain permitting at the local level.

3.6.6 Problems and Recommendations

The Missouri Floodplain Management program tries to keep up with problematic local staff turnover by sending out an annual questionnaire. Recent return rates are relatively low, with little more than 60-percent of communities responding. Interviewees indicate that a biennial list of communities indicating whether they provided Biennial Report data to FEMA would be helpful, apparently unaware that this information is available through the Community Information System as a prepared report.

Recommendations from Missouri interviewees indicated that state staff would like to see FEMA provide more guidance information to states. An example included a top ten list of mistakes that communities make when applying for grant funding. FEMA has indicated previously that it will not provide such a list based on the explanation that it may give one state an advantage over another.

The permitting of state agency development in Missouri, although flawed, has worked well for the state, and staff recommended other states that may be having difficulty in that area should do the same. One interviewee recommended that the Missouri floodplain management program consider regionalizing or decentralizing staff and putting more employees in closer contact with local floodplain staff.

The contracting of hazard mitigation planning to the RPCs has had many positive benefits beyond the time and cost savings originally envisioned as mentioned above in Section 4.6.5, and state staff strongly recommend that other states adopt this approach. A final recommendation regarding the relationship with RPCs is for other states to post an electronic bulletin board. The SEMA blog has allowed the RPCs to trade information, lessons learned, and to post questions to the SEMA staff overseeing the hazard mitigation planning process. This idea served as a valuable training tool for each RPC and SEMA, reducing time spent on phone calls and repetitive questions because each RPC had access to the same bulletin board information.

3.7 North Carolina

3.7.1 Program Overview and Effectiveness

Floodplain management staff in North Carolina have had considerable longevity in an emergency management agency (20+ years), with effective implementation of both NFIP and hazard mitigation projects, and a reputation of highly competent technical assistance provided to communities. The state's recent focus on flood mapping, a result of severe coastal flooding associated with Hurricane Floyd in 1999, has proven to be a model for many other states pursuing FEMA's assistance through the Map Modernization program.

3.7.2 Legal Foundations and State Development in Floodplains

The state statutes for floodplain management are enabling for local communities, and include the regulation of floodways beyond the minimum requirements of the NFIP. The state's Executive Order requires permits from the State Construction Office for state agency development; however, the university system claims an exemption to the requirements for projects under \$500,000. Consequently, the Floodplain Management staff have little knowledge of such projects and whether or not any such development is protected from potential flood damage.

Severe toxic waste in floodwaters during Hurricanes Fran and Floyd highlighted the importance of controlling these substances at the state level. Changes to the North Carolina General Statutes in 2000 for floodplain management at G.S. § 143-215.54A now require NFIP communities to prohibit solid waste disposal and the placement of salvage yards and hazardous materials in floodplains through their floodplain management ordinances.

In the mid-1990s, project delays within the North Carolina Department of Transportation (NCDOT) resulting from unavoidable environmental impacts spurred the agency to seek innovative solutions in cooperation with the North Carolina Department of Environment and Natural Resources (NCDENR). The agencies enlisted the help of the U.S. Army Corps of Engineers in creating a wetlands-oriented mitigation program for development. After several false-starts, the partner agencies signed a Memorandum of Agreement in 2003 to establish procedures and permitting logistics for the Ecosystem Enhancement Program (EEP).

Although the focus of the EEP is on pre-emptive wetland mitigation and stream enhancement, Floodplain Management has become an integral partner in the EEP and is working with other lead agencies on coordination of their permit processes in two key ways: 1) providing liaisons with local floodplain/NFIP officials in the communities; and 2) including floodplain management concepts in the EEP permitting process to streamline local permitting of the same projects. Staff's involvement in the EEP has provided an opportunity to teach the state agencies about the need for floodplain map revisions and the need for local floodplain development permits. The process is still relatively new at the time of this report, but the Federal Highway Administration recognized North Carolina in 2003 for their outstanding environmental stewardship, in part because of the EEP process.

3.7.3 State Coordinating and Other Agencies Affecting Program

The North Carolina Floodplain Management Branch,¹⁹ the state coordinating agency for the NFIP, is housed in an emergency management agency. The North Carolina Department of Crime Control and Public Safety has 13 divisions, one of which is the Division of Emergency Management. Hurricane Fran in 1996 triggered several major department changes, including the appointment of a new director of Emergency Management. The new director reorganized the division, moving Floodplain Management from the Mitigation Branch to the Information and

¹⁹ The agency was renamed to exclude the term "insurance" and ensure that the name focuses on the floodplain management aspects of the NFIP.

Planning Branch in 1996. Interviewees indicate that, as a result of personnel desires, floodplain management was returned to the Mitigation Branch recently.

Between the state's initial participation in the NFIP and the mid-1980s, the location of the floodplain management staff was unstable. Floodplain Management passed through several different agencies, including the Division of Community Planning, the Division of Community Assistance, and the Department of Commerce. Interviews with state staff indicate that the current location in Emergency Management is effective and aids in developing links between the floodplain management, mitigation, and mapping components of the state's overall program for flood hazard reduction. Occasionally, state administrators have been successful at using various mitigation grant programs as leverage to increase or require community compliance with NFIP requirements. Grant applications, for example, will not be processed as long as there are outstanding NFIP compliance violations in the community.

There are currently three planners and one engineer working in North Carolina's Floodplain Management program. Existing staff are regionalized into three geographic areas of the state: east, central and west. These regional boundaries coincide with the boundaries of regions used by the State for other emergency management purposes. Interviewees indicate that although regionalization was not particularly embraced by staff when first proposed by the Division director, the high quality personnel assigned to the regional offices made the concept successful. Very good, very knowledgeable staff who worked well on their own were critical to the success of regionalization of NFIP responsibilities for North Carolina. Communities have accepted the concept because they have continuing contact with a single person, making communication effective and efficient. Interviews with state staff indicate that, ideally, more than one person should be assigned in the regional offices because of the workload.

3.7.4 Problems and Recommendations

Interviewees indicate that the sense of professionalism among the practitioners of floodplain management at the state level is encouraging, but perhaps tenuous if changes in gubernatorial administration or department-level politics were to interfere again as happened after Hurricane Fran. Major hurricanes in recent years have had both positive and negative effects on the state's program. Hurricane Fran apparently resulted in quick, politically-motivated appointments that did not necessarily benefit the overall program of flood hazard mitigation after a major flood disaster. Yet reoccurring floods focused the public and elected officials on associated risks, enhancing some of the tools necessary for leveraging local money and adopting innovative programs.

North Carolina staff's relationship with FEMA Region IV is generally positive, but has been rocky in the past. Interviewees indicate that there have been issues with particular individuals at the region who did not get along with staff at the state for one reason or another, but the region has been cooperative in reassigning their staff as necessary. At one time, the state had four FEMA regional staff assigned to North Carolina, which caused problems because the protocol dictated communication with a single regional staff person. Interviewees indicated that the region's high opinion of North Carolina's program has probably resulted in more autonomy for the state. For example, when hurricanes in fall 2005 occupied much of the regional staff's

time, FEMA purposely became more hands off and North Carolina staff were left to “do their own thing.”

Interviewees indicate North Carolina staff are excited about the potential benefits of their Map Modernization efforts. However, there is concern that when the time comes for the communities to adopt the new maps, FEMA will not financially support the additional workload associated with state assistance to the communities as they adopt and learn to use the new maps. The technical mapping staff are not the same staff who will be providing assistance to communities and the funding has not been dedicated for the technical assistance portion of the project. Interviewees indicate that FEMA has been made aware of this issue.

Because hazard mitigation and floodplain management are so closely linked in North Carolina, issues of hazard mitigation were prominent during interviews with state staff. An issue of concern to the state is the redundancy of effort created by what is termed the “managing state” concept. FEMA recognizes the ability of North Carolina to help prepare and review mitigation grant applications, and the idea behind designating “managing states” was to streamline FEMA’s project review process based upon the work effort of the state. Interviewees indicate that FEMA is not necessarily taking advantage of the state’s proven ability in this regard, and this is discouraging to state mitigation staff.

3.8 Texas

3.8.1 Program overview and effectiveness

According to some FEMA officials interviewed as part of the NFIP Evaluation, floodplain management is a low priority for Texas. One interviewee stated that Texas “makes no effort nor provides any support for floodplain management or compliance,” while another indicated that the existing floodplain management program has “a lot of room to grow.” The state has 972 NFIP participating communities, and a staff of two at the state level to implement the program. Texas does not have dedicated funding for floodplain management beyond the CAP program matching funds, although the state collects a surcharge on flood insurance policies which goes into the state’s general fund.

Both state floodplain management staff and FEMA Region VI staff stated in interviews that high turnover of local floodplain managers and building officials has contributed to the inability of the state to assist local communities and the existence of numerous compliance issues with regard to both public and private development. But in spite of compliance issues locally, the most pressing problem, according to those interviewed, is a general lack of support for floodplain management from the legislature, probably resulting from the legislature’s focus on protecting the property rights of individuals.

FEMA Region VI has instituted a regional approach to its administration of the NFIP in Texas and employs five Natural Hazard Program Specialists, each assigned to distinct areas within the state. FEMA Region VI asserted that they have had to “take up the state’s slack” in some cases, where the state has fallen short of its responsibilities under the NFIP. Despite FEMA’s additional workload, FEMA regional staff estimate that they still do not maintain

regular annual contact with 80-percent of the NFIP communities in the state. The regional staff repeatedly emphasized in interviews that the provision of adequate training has resulted in higher compliance in communities within that state; however, they acknowledge a general lack of compliance in communities in their region. One local official also indicated that in a post-flood scenario FEMA has historically been more responsive to local needs than the state.

Some FEMA Region VI problems that may negatively influence the effectiveness of the Texas program were mentioned during interviews, including: 1) few communities exceed the NFIP minimum standards; 2) consistent interpretation of standards from regional staff is lacking; and, 3) perception that compliance actions are thwarted by political pressure or by FEMA Headquarters, so enforcement of NFIP standards from a regional perspective is weak and developers know and exploit this.

The relatively high ratio of 486 communities to one staff member is a main reason why the state can make relatively so few community visits (CAVs and Community Assistance Contacts) per year. Each participating community receives a CAV approximately every twelve years, compared to FEMA Region VI's goal of a CAV every five years. In order to bring this visitation rate more in line with the Region's goals, the state recently started contracting out CAVs to an engineering firm. State contractors do approximately 25 to 30 CAVs per year.

3.8.2 Legal strength/formality

As stated by one interviewee, Texas is a property rights state. As such, the state does little to interfere with private development in the floodplain and has adopted only enabling legislation to allow local jurisdictions to participate in the NFIP. There is conflict among those interviewed at both the state and FEMA Regional level as to whether new state law, adopted August 30, 1999, requires participation in the NFIP by all communities. According to the Texas Water Code, §16.3145, "The governing body of each city and county shall adopt ordinances or orders, as appropriate, necessary for the city or county to be eligible to participate in the National Flood Insurance Program." The difference between requiring communities "to be eligible to participate" versus requiring them to adopt ordinances and participate in the NFIP remains unresolved.

Texas law makes a distinction between "home rule" cities and "general law" counties or smaller cities. The distinction is important to floodplain management because the Texas Constitution does not give explicit authority to counties or unincorporated areas to adopt, implement or enforce zoning or building codes. According to some interviewees, even in the late 1990s, counties that had joined the NFIP lacked the legal authority necessary to require that developers adhere to their floodplain management ordinances.

In response to devastating flooding in the late 1990s, the Texas Legislature passed Senate Concurrent Resolution 68 (1999), sponsored by Senator Ken Armbrister. SCR 68 established a Blue Ribbon Committee to develop legislative recommendations for improving state agency coordination in preventing and mitigating damage and flood relief. Blue Ribbon Committee members included: Texas Department of Emergency Management (chair); Texas Department of Transportation; Texas Natural Resource Conservation Commission, Texas Water Development Board, Texas General Land Office, and representatives from cities, counties, and river

authorities. The resolution also directed that the Committee submit a report with its recommendations to the Legislature prior to the beginning of the 77th Legislative session in January 2001.

The floodplain management related recommendations contained in the Blue Ribbon Committee Report prompted the 77th Texas Legislature to pass Senate Bill 936. The bill was supported by communities participating in the Texas Colorado River Floodplain Coalition. In their letters and resolutions in support of the legislation, these communities stated that the bill was critically needed to address the increasingly rapid rate of development in the floodplains of rivers, lakes and streams.

The bill provided all Texas communities, cities and counties, the option to adopt floodplain development requirements above the minimum necessary to qualify for participation in the NFIP. Communities were also enabled to set permit fees for floodplain management, and participate in floodplain management initiatives such as the NFIP's CRS program by adopting regulations that exceed NFIP minimum standards. The bill was enacted by the 77th Texas Legislature and went into effect September 1, 2001.

There are currently no active Executive Orders for Texas that address floodplain management. According to one interviewee, the current state's Attorney General issued an opinion that Executive Orders do not carry over to subsequent gubernatorial administrations, thus invalidating an EO for floodplain management that was written by a previous governor.

3.8.3 State Development in Floodplains

The Floodplain Management section of the Texas Commission on Environmental Quality has developed Memorandums of Understanding (MOUs) with the various state agencies that may develop in floodplains, including: Building and Procurement Commission, Department of Mental Health and Retardation, Criminal Justice, Parks and Wildlife, Low-Level Radioactive Disposal Authority, Department of Transportation (TxDOT) and the Military Facilities Commission. Each MOU is unique, and none are very strong according to those interviewed.²⁰ The documents were developed beginning in 1988 in response to lawsuits claiming TxDOT development was causing increased flooding. TxDOT had not been meeting with local officials prior to commencing development in the floodplain.

According to other state staff interviewed, internal changes at TxDOT, in addition to the MOU, have led to a much more successful working relationship with communities regarding the placement of development. Younger staff at TxDOT, including an increased number of ASFPM Certified Floodplain Managers (CFMs) on staff in the agency, and in-depth training for other staff have brought changes in the way TxDOT plans and implements development projects in floodplains.

Floodplain Management does not have an MOU with the state's university system, and the lack of an agreement has led to problems with flood-prone development in the past. For

²⁰ The study team requested copies of the MOUs but did not receive any.

example, a University of Texas Medical Center was built below grade in the floodplain in Houston and suffered significant flood damage due to Hurricane Allison in 2001. Floodwater disabled emergency power generators and major medical equipment located in basements. The resultant media attention, according to interviewees, may have taught the university system a very necessary lesson, and the Medical Center now has a mitigation plan in place to help address their flood risk.

3.8.4 State Coordinating and Other Agencies Affecting Program

The state's NFIP Coordinator has been with the Texas program since inception, when the program was originally housed in the Water Development Board. The Board dissolved and later reconstituted, but the Floodplain Management program was moved to the Texas Commission on Environmental Quality (TCEQ), formerly the Texas Natural Resources Conservation Commission. According to those interviewed, the state legislature is currently considering moving floodplain management either back to the Water Development Board or to the Division of Emergency Management. FEMA has indicated that the state's floodplain management program must improve before the agency will approve enhanced status for the state's Hazard Mitigation Plan.

One interviewee indicated that the state's program of floodplain management is extremely fragmented, with floodplain management and mitigation programs spread among Emergency Management (Hazard Mitigation Grant Program and Pre-Disaster Mitigation), Water Development Board (Flood Mitigation Assistance) and TCEQ (NFIP State Coordinator). The fragmentation creates additional work and requires complex coordination, especially with regard to mitigation grant project review and funding.

One interviewee theorized that Emergency Management has traditionally been interested in only those aspects of floodplain management that involve distributing funds, or being the "white horse," while keeping the compliance aspects of management in another agency, the "black horse." Now that the enhanced mitigation plan will require additional efforts in floodplain management, Emergency Management may be reconsidering the separation of activities. Currently, the two agencies work together on a quarterly basis as part of the state's hazard mitigation team. One interviewee with the Water Development Board mentioned that changing the home agency of the floodplain management program does not seem, to him, to be the solution to the state's woes. Instead, the interviewee asserted that increased state funding for the program is the only way to solve the myriad problems.

3.8.5 Sub-state authorities

Numerous sub-state authorities assist the state with implementation of various aspects of floodplain management. The Lower Colorado River Authority (LCRA), funded by the sale of water and electricity, has limited police powers, and no land use authority, but representatives generally support the tenets of floodplain management and have provided technical assistance to communities within their jurisdictions. The Texas Colorado River Floodplain Coalition helps the state by conducting unofficial community visits, and provides additional training in floodplain management to local officials.

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of more than 200 cities, counties and special districts in a 16-county region. Staff assist members in planning for common needs. The NCTCOG is a Cooperating Technical Partner with FEMA, and is generally active in floodplain management. The group has instituted a regulatory permitting process for floodplain development in a designated Trinity River corridor. In conjunction with the Trinity River Association, NCTCOG developed a “Common Approach” vision for floodplain management along the Trinity River, and implemented the regulatory approach which supports and enhances the community floodplain permitting processes. According to state staff, the role assumed by the sub-state authorities has made the state’s job easier, especially in areas managed by NCTCOG or LCRA because compliance problems rarely come up in those areas.

The Texas Floodplain Management Association is very active in two specific regards. First, the association coordinates communities that experience damaging floods with assistance from staff in other communities. These mutual aid teams used to be reimbursed by the state, but the funds are no longer available. Second, the association sponsors many training events for local floodplain management officials. State staff indicated that they would be interested in coordinating with the association to enhance this role, and to target the training for specific groups such as surveyors, insurance agents, engineers, builders and realtors.

Recommendations arising from Texas interviewees for improving the state’s floodplain management program included requiring a hard match of CAP funding from states (50-percent/50-percent), granting the FEMA Regional office more authority regarding the NFIP’s enforcement actions to make them less susceptible to real or perceived political influence, and penalizing communities (not just property owners) for NFIP compliance violations. Another interviewee recommended that the state implement a regional approach to floodplain management using district offices similar to other state agencies. One interviewee strongly recommended that state agencies need to lead by example with regard to development in floodplains, and that state development must be subject to at least the minimum NFIP standards if not more restrictive ones.

3.9 Washington

3.9.1 Program Overview and Effectiveness

According to those interviewed, the State of Washington has implemented a strong floodplain management program with a foundation of state statutes supporting a high level of community compliance. The state contributes more money and staff than other state in FEMA Region X, according to FEMA interviewees. The state has a well-developed network of four field offices, including the central office, to aid in providing technical assistance to the state’s 276 NFIP participating communities. The ratio of 37 communities to one staff member is a clear benefit to local NFIP administrators. FEMA Region X interviewees are complimentary of Washington, focusing on the state’s extremely well-managed program and effective use of CAP funds.

3.9.2 Legal Foundations

Washington has been a leader in floodplain management, beginning as early as 1935 when the State Legislature enacted one of the first state floodplain management laws in the country in response to severe flooding in 1933. The law set up a permitting program for construction in specific Flood Control Zones. In 1969, the state prohibited construction of residential structures in floodways, but because floodways were not shown on the Flood Control Zone maps, enforcement was difficult. Nonetheless, the state maintained and strengthened the statutes over time (WDE 2004).

In 1987, the state amended the 1935 law by eliminating the Flood Control Zones and consolidating that program with the NFIP to avoid the confusion produced by the two separate permitting programs. In 1987, the legislature also enabled the Department of Ecology to establish minimum state standards for floodplain management and to disapprove ordinances that did not meet state and federal requirements. Ecology adopted rules including a prohibition on most new V Zone development, and a one foot freeboard. Both of these rules were immediately controversial upon implementation. In 1989, the legislature repealed the law authorizing Ecology to establish standards, and simultaneously tightened substantial improvement rules for floodway structures, prohibiting reconstruction of substantially damaged residences in the floodway. (Floodplain Management in the State of Washington: A Status Report as of February 2004).

The state's current floodplain management law is contained in Chapter 86.16 of the Revised Code of Washington, and supported by administrative procedures of Chapters 173-158 of the Washington Administrative Code. In addition to the prohibition on residential construction in floodways, Washington also has enabling legislation at Chapter 86.12 RCW that allows counties to levy taxes, condemn properties and undertake flood control activities. Adopted in 1984, Chapter 86.26 RCW establishes the Flood Control Assistance Account Program (FCAAP) which appropriates \$4,000,000 every two years toward local flood hazard management efforts.

Budget constraints in recent years have reduced the funding for FCAAP, but the interviewees still believe that being able to offer such funds to local communities dramatically increases local perception of the state's floodplain management program. Rather than dealing solely with compliance, the state also has project and planning money to give to compliant communities. Interviewees feel that there may also be evidence that state legislative support for floodplain management is eroding over the long-term, but did not identify specific areas where this is a concern. Policy windows such as the time following big floods have historically helped push the state's legislature toward more restrictive regulations or toward increased funding for mitigation. For example, in 1996 severe flooding prompted the legislature to double the FCAAP appropriation for a short period.

FEMA Region X has developed an agreement with Washington wherein FEMA agrees to enforce any state regulation as it would the minimum NFIP requirements. A violation of state regulations therefore qualifies as a violation in the region's view, as well. FEMA interviewees reported that Washington communities have a high level of compliance in part because of the enforcement of state standards that exceed NFIP minimum requirements.

3.9.3 State Development in Floodplains

Washington Administrative Code 236-100 requires that all state development comply with the federal NFIP and state floodplain management standards. Ecology participates in the review process for government action, which is outlined as part of the State Environmental Policy Act, enacted in 1971. The review determines if an Environmental Impact Statement is required, but the application also requires a statement as to whether the project or action is located in the SFHA. The review process has been effective at mitigating flood risk to state structures, according to interviewees. One state interviewee could not recall any state facilities that have suffered flood damage, although the state does not maintain a list of state-owned structures in the floodplain.

The Department of General Administration also reviews state development proposals, and Ecology has always had close contact with reviewers in that agency. Recently however, staff turnover in General Administration may have weakened this relationship.

The primary exception to the state development processes outlined above is any project by the Higher Education Board. According to interviewees, Ecology staff have been involved in community college campus planning, but the process has raised concerns among reviewers because of its lack of formal procedures. An example was provided during interviews regarding the University of Washington. The university purchased and developed land that had been altered by a previous owner in violation of NFIP standards. The University ended up working with agency staff to minimize impacts, but floodplain managers and wetland managers had to insert themselves into the discussions to ensure their views were considered.

3.9.4 State Coordinating and Other Agencies Affecting Program

The Washington NFIP coordinating office is housed in the state's Department of Ecology, and has been since the state joined the NFIP. Interviewees indicate that the agency is an appropriate home for the NFIP because there are shared functions between the NFIP and other Ecology departments, such as water quality and dam safety. Ecology has floodplain management staff in four regions, all of whom conduct CAVs, assist with grant administration and provide NFIP technical assistance to local communities.

The main disadvantage of being located in Ecology is that the program is separate from the hazard mitigation funding programs of Emergency Management (FMA, HMGP and Pre-Disaster Mitigation). However, staff of the two agencies maintain regular contact and have a good working relationship when reviewing projects for various grant programs. The large group that convenes to review grant requests has been able to cobble together money from various programs to support projects that warranted special consideration. The group contains representatives of numerous state agencies, as well as FEMA, the U.S. Army Corps of Engineers, and state planning agencies.

None of the states in FEMA Region X have state NFIP coordinating programs housed in emergency management agencies. FEMA interviewees believe that this is a positive fact because state personnel can be used wholly for flood issues, rather than having to deal with all hazards

and spending time as first-responders on disaster teams. The state floodplain management staff are thus able to develop much stronger relationships with local community officials.

3.9.5 Sub-State Authorities

Washington's state and local floodplain management officials participate in the Northwest Regional Floodplain Managers Association (NORFMA), in conjunction with officials from Alaska, Idaho, Oregon and British Columbia. The association is not a chapter of the ASFPM, and does not appear to be very active in the legislative arena for Washington. In some cases, NORFMA has helped states with letter writing campaigns to support various legislative agendas.

The Floodplain Management staff of the Department of Ecology have successfully implemented a cooperative program with the Washington Conservation Corps (WCC), which is located within Ecology. The WCC can be tapped to provide assistance to communities and the state for flood fights and flood recovery. This partnership provides state staff with yet another proffer to communities in need of assistance.

3.9.6 Problems and Recommendations

Interactions between Washington staff and FEMA Region X staff appear to be very positive and non-controversial, according to interviewees. Generally, the FEMA staff rely on the state staff for information and opinions and the state staff have found FEMA to be cooperative, knowledgeable and consistent. Turnover at the FEMA Regional office has been high, and Washington staff have had to work with numerous Natural Hazards Specialists over the years, but this does not appear to have been problematic.

3.10 Wisconsin

3.10.1 Legal Foundations

Wisconsin takes a pro-active approach to floodplain management that extends beyond the NFIP minimum requirements for state participation. The state's regulations for floodplain management at Natural Resources Chapter 116, as administered by the Department of Natural Resources (DNR), are extremely detailed with specific provisions for mapping techniques, residential and nonresidential construction in floodways and flood fringe areas, fill in the floodplain, and flood control structures such as dams and levees. Each of the requirements must be adopted at the local level, as well. The regulations outline DNR responsibilities for floodplain management, which include:

- Assistance to municipalities;
- Review and approval of floodplain zoning ordinances;
- Monitoring the administration and enforcement of municipal floodplain zoning ordinances; and,

- Enforcement of municipal floodplain zoning ordinances.

According to those interviewed, the state regularly exercises its authority to impose direct enforcement actions, such as fines or ordering structures moved, and the ability to force-place floodplain management restrictions in communities. Most flooding that occurs in Wisconsin is on agricultural land. Interviews show that, as a result, the public has little exposure to flooding, which was believed by some to hinder public support for the NFIP statewide.

The state prohibits encroachment in the floodway and requires dry road access to the floodplain for new development, meaning that the road providing access to a new structure in the floodplain must also be elevated to or above the base flood elevation. Interviewees indicate that the dry road access rule has been extremely difficult to enforce and has rendered some rural development virtually impossible. Wisconsin also has a two foot freeboard requirement for fill in flood-prone areas. Strict wetlands regulations in Wisconsin have had the effect of eliminating much of the floodplain from consideration for new development.

Multiple interviews indicate that the state legislature has recently trended toward weakening some state floodplain management regulations that exceed NFIP standards. There appears to be strong support for property rights in the state legislature at present, which contributes to an anti-regulation environment in general. For example, in 1990, the state legislature passed a law requiring that flood-prone structures damaged by any event other than a flood must be brought into compliance with the NFIP minimum standards, but not the more restrictive state standards. Another recent bill proposed that the substantial improvement threshold for the state be changed to 75-percent. The state's NFIP administrators were able to thwart the measure by pointing out that this action would result in the state being deemed noncompliant with the NFIP requirements.

DNR could conceivably exert more influence on the legislature in an effort to prevent weakening of state floodplain laws; however, one interviewee indicated that the DNR director is now a gubernatorial appointee, meaning that the department's actions are more likely to be politically motivated than motivated by the long-term public interest. A former state employee indicated that the state's single-purpose focus on floodplain management through state regulations may have been detrimental. If regulations were to be rescinded, the state would not have a strong backup system in place for providing planning and other technical assistance to local NFIP communities.

3.10.2 State Development in Floodplains

State buildings in the floodplain are extremely rare in Wisconsin. A state policy memorandum regarding state construction in the floodplain, coupled with knowledgeable staff in the Wisconsin Department of Administration, and plenty of developable land outside the floodplain contribute to avoidance of flood-prone state development. The Department of Administration must approve all new state structures. Interviewees indicate that state agencies are well aware of the role of the DNR in managing floodplain development and have consistently supported state laws, despite a lack of regular contact or training at the state level.

One interviewee cited an interagency agreement between DNR and the Wisconsin Department of Transportation (WisDOT) regarding transportation projects and review of those projects by DNR. According to interviewees, WisDOT conducts case-by-case flood encroachment studies, as necessary. Further examination of the cited agreement indicates that the policies for DNR review are part of the WisDOT regulations at Transportation Chapter 207 (or Trans 207). The standards cited therein are applicable mainly to municipal highway bridges in or over navigable streams, with the focus on maintaining navigability. The regional offices of DNR, not the central office, interact directly with WisDOT.

3.10.3 State Coordinating and Other Agencies Affecting Program

Wisconsin's floodplain management program is housed in the DNR, one of the largest agencies in the state. Much like California, the NFIP coordination aspects are only a portion of an overall state program of floodplain management. The program currently has nine staff who work out of five DNR regional offices and the central office. The regional offices are organized along watershed boundaries. Interviewees at the state level indicate that the regionalization concept has worked relatively well in Wisconsin because the state capitol at Madison is geographically isolated from the rest of the state and budget restrictions on travel make trips throughout the state difficult to fund. However, interviewees identified two problems that hamper the overall effectiveness of regionalization of state floodplain management functions: 1) floodplain management staff report to regional managers, not to the central office or NFIP Coordinator; and 2) while regions are good for day-to-day management of the NFIP, there is a lack of overall consistency regarding CAP activities across regions.

Before a 1996 reorganization within DNR, all CACs and CAVs were conducted by the central DNR office floodplain management staff. Following the reorganization, the state has tried to urge FEMA Region V staff to coordinate with DNR regional staff. According to interviewees, FEMA staff have resisted and prefer to deal instead with a single person responsible for NFIP coordination statewide. Echoing remarks from interviewees in other states, state staff are often frustrated that the state's assigned FEMA Regional staff person is often unavailable to respond to NFIP-related questions in a timely manner. Field assignments to other disasters distract FEMA staff and make it difficult for state staff to get timely answers. State staff want FEMA to focus on floodplain management issues and community problems, rather than what seems to be constant distractions with disaster response. One interviewee disparaged FEMA's tendency to constantly "count widgets", or try to quantify everything a state is doing for CAP, rather than truly assisting the states in solving permitting or regulatory issues in real-time. A former FEMA Headquarters employee's opinion of Wisconsin's program reinforced the fact that the state is often at odds with the Region, possibly because Wisconsin's program wants to be entirely independent of FEMA except when FEMA is needed to assist with enforcement actions. However, overall, both parties agree that the state's program is exemplary and relatively self-sufficient.

3.10.4 Sub-State Authorities

The Wisconsin Association for Floodplain, Storm-water, and Coastal Management is relatively new. Founded approximately four years ago, the state chapter of the ASFPM is not particularly active according to those interviewed. In some cases, the association has sent letters on topics of interest to various interested parties at the state level. The DNR has a

legislative liaison, although the agency is not permitted to directly lobby the legislature. DNR can provide information to the legislature or to independent citizen groups who then lobby the legislature.

3.10.5 Problems and Recommendations

Interviewees indicated that state officials have concerns related to maintenance of FEMA's CIS. The information is not current, not maintained, and the database management system is outdated. State maintenance of a supplementary community floodplain manager database is necessary but difficult, and staff changes at the local level are hard to track. State staff indicated that FEMA sometimes sends official correspondence only to community Chief Executive Officers which often results in ill-informed local NFIP administrators, to the detriment of the overall program. Even though FEMA policy is to send correspondence to the State NFIP Coordinator and the local floodplain administrator, this does not always happen.

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4. ANALYSIS AND CONCLUSIONS

The individual case studies of states examined in this study indicate vastly disparate experiences and floodplain management program priorities and concerns in each of the ten states. The unique characteristics of each state, including such factors as legislative history, personalities involved in floodplain management, and geography have combined to weave a nationwide quilt of floodplain management programs that vary dramatically in content, strengths and weaknesses; however, each studied state appears to provide a minimally suitable level of assistance to communities participating in the NFIP. Moreover, each state program is a “moving target” as state statutes are constantly examined and changed, personnel turnover provides new vigor or deprives the state of valuable talent, major disasters alter at least for a while the public’s grasp of the importance of floodplain management concepts, and increasing development pressures challenge state officials. During the course of this study alone, personnel changes in Wisconsin have created a new regime of floodplain managers, political upheaval in California resulted in the Governor appointing all new members to the Water Reclamation Board, and Hurricanes Katrina and Rita in 2005 are expected to result in major changes in the way the NFIP operates not only in Louisiana but also for FEMA and the NFIP as a whole.

Despite the uniqueness of each state’s program, there are several common features that can be examined in more detail to help determine the validity of the study hypotheses and answer key research questions. Quantification of results in this study is not feasible; however, a qualitative analysis of key aspects of state programs has resulted in the formulation of many conclusions and then recommendations that are provided in the final sections of this report. What follows next are the analysis and conclusions of the seven hypotheses described in Section 3.1 followed by some overall conclusions based on a combination of information generated from the background and case studies.

4.1 Analysis and Conclusions of Hypotheses

Table 9 provides a summary of information gathered in the case studies and categorizes the information based on the primary study hypotheses presented in Section 3.1. The table illustrates a variety of characteristics associated with both effective and moderately effective programs. Information provided in Columns 3 through 10 is related to the numbered hypotheses as shown in Row 2.

“Effective State Statute Implementation” and “Effective Regulation of State Development” are subjective determinations based on the case study data presented in Section 4 regarding the adequacy, implementation, enforcement, and continuity of state regulations governing floodplain development and particularly state construction. “Length of NFIP Coordinator/Agency Relationship” refers to generally how long the NFIP Coordinator has been housed in the same or related agency. Agencies are reorganized regularly, and administrators come and go, so this column represents a general perception based on anecdotal evidence from the interviews and case studies. “State Staff Turnover” refers to the staff of the NFIP Coordinator’s office, including the Coordinator, and their time in that position. In some cases, evidence gathered from interviews was insufficient to allow a conclusive determination. “Criticality of Co-Location” is an indication of the perceived importance of physical proximity

to other agencies with floodplain-related activities. “Involvement of Sub-State Authorities” indicates a general level of involvement by agencies, associations and other groups outside the NFIP Coordinator’s agency.

Because each of the state programs examined has achieved some level of compliance with NFIP state program standards, the designations “effective” and “moderately effective” (Table 9, Column 2) were used to differentiate between what are perceived by many floodplain management professionals to be strong programs versus those that still struggle to meet the minimum standards. These designations are not meant to express a finding of this report, merely to help differentiate between general levels of state programs so that their components may be analyzed more thoroughly.

TABLE 9: Key State Program Characteristics Gathered from Case Studies

State	Perceived Effectiveness of State Program	Hypothesis ²¹							
		1	2	3		4	5	6	
		Effective State Statute Implementation	Effective Regulation of State Development	Agency Housing NFIP ²²	Length of NFIP Coordinator/Agency Relationship	State Staff Turnover ²³	Criticality of Co-Location	Regionalized NFIP Administration	Involvement of Sub-State Authorities
Arizona	Effective	Yes	Inconclusive	Regulatory	Long-Term	High	Not Critical	No	High
California	Effective	Yes	Partially	Regulatory	Long-Term	High	Not Critical	Yes - Important	Medium
Florida	Effective	Yes	Yes	Regulatory	Long-Term	Low	Not Critical	No	Medium
Louisiana	Moderately Effective	Partially	No	Planning	Inconclusive	Inconclusive	Not Critical	No	Medium
Maine	Effective	Partially	Partially	Planning	Short-Term	Low	Not Critical	No	Low
Missouri	Effective	No	Partially	Planning	Short-Term	Inconclusive	Not Critical	No	Low
North Carolina	Effective	Yes	Yes	Planning	Short-Term	Moderate	Not Critical	Yes - Important	Low
Texas	Moderately Effective	No	Partially	Regulatory	Long-Term	Low	Not Critical	No	High
Washington	Effective	Yes	Yes	Planning	Long-Term	Low	Not Critical	Yes - Important	Low
Wisconsin	Effective	Yes	Yes	Regulatory	Inconclusive	Moderate	Not Critical	Yes - Important	Low

²¹ Information gathered for Hypothesis 7 indicated that states shared similar opinions of working relationships among Federal, state and local agencies; therefore, no column was included for this information.

²² This designation refers to the type of agency that the program has been placed in rather than whether or not the agency has regulatory authority.

²³ A complete employment history of all floodplain management staff in each state was beyond the scope of the study. The information was gathered from some state personnel, but not all.

Hypothesis 1: States that take responsibility for floodplain management and floodplain development beyond the federal requirements of the NFIP, achieve more successes in floodplain management than states that concentrate solely on the NFIP.

The wide variety of state floodplain management program characteristics, while difficult to fully understand from just a subset of ten states, roughly mirrors the range of differences in the full set of fifty states. The minimal direction provided by 44 CFR Section 60.25 and FEMA to each state at the beginning of the NFIP did not mandate common state goals or means to attain them in any detail and could only be expected to result in such disparity. The federal regulations provided only the key ingredients for state participation and directed states to take action. Just as ten professional chefs would prepare ten different recipes provided a few key ingredients, so too have the states examined in this study approached the significant problem of flood risk reduction.

The case studies indicate that the lack of clear state statutes and guidelines can hinder the implementation of effective floodplain management programs, such as state agency development according to NFIP regulations. In particular, many state interviews, including California and Washington, revealed inadequate state requirements for the placement and development of the state's educational facilities. The interviews also indicated state laws and regulations for floodplain management may be inadequate for one or more reasons, including: 1) failure to address a particular scenario; 2) ambiguous language that is open to multiple interpretations; 3) inability of the state to create and enforce specific regulations; or 4) in the case of executive orders, inability of the standards to withstand administration changes.

As shown in Table 9, studied states that take responsibility for floodplain management beyond the minimum requirements and adopt regulations governing development (both public and private) have effective programs. States that do not have guiding legislation, however, have had divergent results. States such as Missouri, with no state statutes and little oversight of state development, still have effective state programs overall at least in the initial years since the motivating disaster resulting from the 1993 floods. In contrast, Texas, with no state statutes and little oversight of state development, has only a moderately effective program overall. This finding supports hypothesis one, with the caveat that state programs still may be able to be effective in the absence of guiding legislation.

An additional finding of this report related to the commitment of state resources to floodplain management programs beyond the minimum is that the lower the ratio of communities to state floodplain management staff, the more likely the state program will be effective. Increased response times, increased training and more community visits strengthen local programs by increasing compliance and empowering the communities to actively enforce ordinance requirements. Whether those human resources at the state level are supported by state funds or federal CAP-SSSE funds appears to be of minor importance, although states that invest their own dollars toward floodplain management tend to have more comprehensive or detailed legislation governing how those funds are administered.

Based on the experience of states examined for this study, states with tremendous population growth and development pressure will experience one of two outcomes with regard to the state program for floodplain management. Either the program gradually develops stronger support capability to respond to pressure to develop floodplains and wetlands, or pressure from

developers gradually erodes the state's commitment to managing floodplains beyond NFIP minimum requirements.

Florida provides an example of the former that extends beyond floodplains to other environmental programs, in which state-level development reviews have been gradually integrated into local permitting processes. Staff in rapidly developing counties and municipalities conduct many of the reviews formerly performed by state staff. In Florida's flood mitigation program, project design capability within local governments has increased as resources at the state are stretched thin by successive disasters. The state floodplain management program has been instrumental in providing training to ensure this outcome. The growth of coastal population in North Carolina and overall population increases in California have contributed to both states' augmented emphasis on flood hazard mapping. In coordination with FEMA, both states have committed large amounts of state funds toward map products that supplement or enhance traditional FEMA products.

Although Arizona is faced with dramatic population growth and development pressure, the state seems to be in transition with regard to developing local capability. By creating local flood control districts, state statutes automatically passed responsibility from state staff to local staff. While state capacity and ratios of communities to staff are not ideal, the overall program of sub-state authorities appears to be developing strong support capability for floodplain management despite development pressures.

Texas provides an example of a state program that is highly susceptible to developers and property rights proponents who seek to erode floodplain management regulations and guidelines. The state contributes only the minimum resources required by the NFIP despite the obvious inadequacies of those resources in fulfilling the goals of the NFIP and CAP-SSSE. As a result, local capability for effective floodplain management is hampered by a lack of training and coordination.

Hypothesis 2: State coordinators located within agencies with state regulatory functions are more effective than those in planning agencies or lower-level administrative departments in determining how state programs for floodplain management are implemented.

As shown in Table 9, five state coordinators in the case studies were housed in planning agencies and five in regulatory agencies. Both types of agencies were found in effective and moderately effective programs. Therefore, the hypothesis that the type of agency influences the approach and effectiveness of the state's floodplain management program is not supported based on these case studies. Other factors may be more important. Looking at the details of where agencies have been located, in some cases the tendency of high-level state officials to periodically change the agency housing the program may have disrupted the continuity necessary to establish and maintain contacts and a pattern of effective technical assistance, but in both states where the program had been housed continuously in a single agency and also states where the program has been moved, program priorities were consistent.

The longevity of an NFIP program's relationship with an agency may tend to increase if that agency has a regulatory or permitting function. Whereas non-regulatory programs may be viewed as optional, regulatory functions are understood by administrators and elected officials to

be necessary and long-term funding and capability are established. In this sense, the regulatory versus non-regulatory designation for an agency may have a slight impact on NFIP program capability and longevity. One interviewee pointed out that this phenomena is also seen with state dam safety programs, which are likewise housed in a variety of agencies.

In terms of approach, the focus for each program was providing technical assistance to communities and improving local capability regardless of the professional credentials of the coordinator or the type of agency housing the program. Enforcement resources within regulatory agencies (*e.g.*, marine police or natural resource officer) do not appear to be used for resolution of floodplain management compliance problems as suspected, and the NFIP's system for compliance resolution does not require professional capabilities unique to a regulatory agency. Planning agencies may have a slight advantage in providing technical assistance to communities because the agencies are already structured to perform community-based tasks (*e.g.*, workshops, training) for other initiatives.

For example, Florida floodplain managers are able to more easily integrate flood mitigation planning assistance with other types of disaster-related planning assistance due to the structure of the agency and existing training programs designed specifically for community-level officials. Although Louisiana's floodplain management program is similarly located in a planning agency, the transportation agency does not have a community-centric focus, and instead is structured on a regional breakdown of the state. The lack of agency-wide focus on the local community official may have hindered the floodplain management program's ability to piggyback on other agency programs and opportunities to interact with local NFIP officials.

Hypothesis 3: Lower personnel turnover in the agency in which the NFIP State Coordinator is housed results in stronger floodplain management programs.

The case studies indicate that benefits accrue to states when NFIP State Coordinators and other staff assisting in compliance and technical assistance remain in their position for a long time, even if the agency housing him or her changes. As a consequence of being in the position for a long time, effective administrators, as in Maine, provide consistent, firm interpretation of statutes and regular training opportunities for local NFIP administrators and other state agencies even without a state agency being underpinned by a regulatory function and a low ratio of communities to staff. Over time, interaction with other agencies leads to improved interagency communication, a greater willingness to work together, a wider implementation of NFIP provisions, and increased credentials of the state coordinators. Having low turnover also results in a better understanding of the NFIP at the local government level and among interested community groups.

California provides a unique example to support this hypothesis. Turnover at the headquarters level of the NFIP State Coordinator is relatively low and the state has reaped numerous benefits from the long-term contributions and institutional knowledge of these employees. However, turnover in the regional offices has been relatively high due to the lack of career track incentives for technical, engineering personnel who maintain much more regular contact with local officials and are more actively involved in resolving compliance issues. The continuity at headquarters improves the overall program effectiveness with regard to intra-

agency coordination, while the turnover in the regions seems to weaken the day-to-day interactions with local officials and resolution of specific permitting or compliance issues.

Infrequent turnover at the state level increases the professionalism of the staff, and results in staff committed to the principles of floodplain management. Such long-term staff are more likely to pursue professional accreditations and tend to expand their credentials through continuing education opportunities. The Certified Floodplain Manager (CFM) professional certification program of the ASFPM is a testament to the increased professionalism within the entire field of floodplain management, particularly at the state level. The program recognizes continuing education and professional development that enhance the knowledge and performance of local, state, federal, and private-sector floodplain managers. Floodplain managers come from a variety of curricula and backgrounds; there is no college-level degree program for floodplain management. The CFM program is directed toward individuals from widely varying occupations, interests, and educational backgrounds who have routine floodplain management duties. This includes community/state/federal officials, the private sector, academia, interest groups, and private citizens. Several state officials interviewed indicated that new state policy requires that all state staff involved in floodplain management obtain CFM certification. It is expected that certification requirements such as the CFM for floodplain managers will result in more committed, long-term employees.

Despite the affirmations above, professional floodplain managers interviewed indicated that small programs like floodplain management with few staff are inevitably driven by the unique personalities of the program and agency leadership over time. Strong leaders can achieve the benefits of a long-term program in a short period. A less dynamic individual in the NFIP Coordinator position for upwards of 15 years may never attain such success. States that hire or promote talented, knowledgeable, and outspoken advocates for floodplain management into their NFIP program will reap the benefits of the individual's commitment to reducing flood losses. The overall concept of a single NFIP Coordinator at the state level appears to function well in the case studies and their individual capabilities are strongly tied to the overall capabilities of the state program. In other words, each coordinator is instrumental in defining each state's role.

Hypothesis 4: Physical proximity to other related state agencies and programs increases the strength of a floodplain management program.

Based on case studies, the physical location of state coordinating agencies with regard to other state agencies was unanimously believed not to be critical. At best, interviewees said co-location made only a minor difference in overall program implementation. Interviewees observed that co-location in a building or cluster of buildings supports unplanned or casual interactions and inter- and intra-agency communication. However, many of those interviewed indicated that they felt co-location was not a primary factor in how well the state administered their overall floodplain management program. More important than co-location may be the number of agencies involved in floodplain management, hazard mitigation planning and flood disaster response. If a large number of agencies are involved such as in Louisiana and Texas, the amount of influence exerted by a single person or group with strong interest in floodplain management is reduced, whereas, if only one or two agencies are involved as in California and North Carolina, the amount of control exerted by those agencies is much stronger. Morse (1962) first observed the inverse relationship between the number of agencies involved in flood mitigation and

program effectiveness. Interview data supported this observation but was insufficient to confirm it.

Hypothesis 5: Regionalization of state floodplain management functions increases accessibility to local floodplain managers, improving the relationship between state and local programs.

Four of the states examined have regional offices to provide more frequent and available community contact with state officials. This regionalization of floodplain management responsibilities was thought by many to be an important component of effective state programs. Interviewees in North Carolina and California also mentioned that their programs were successful because only knowledgeable staff were hired in regions and those staff reported directly to floodplain manager(s) at the headquarters level. Programs were less successful when staff reported to regional supervisors as in Wisconsin. Based on California's experience, regional staff, especially engineers, need a career track program to help prevent high turnover.

In Texas, FEMA assigns its own staff to specific geographic regions of the state to help increase the availability of technical assistance for Texas communities. Although regionalization would appear to be beneficial for a state as large in area as Texas, limited resources at the state level prevent program officials from incorporating a regionalized approach to floodplain management. If a large state's floodplain management program is regionalized with state floodplain managers assigned to several sub-regions, the program appears better equipped to provide assistance to local communities. If a small state has a single state floodplain manager, the state's program is dependent on the personality, characteristics, work ethic and abilities of that individual, and a regionalized approach to floodplain management may or may not be prudent.

Hypothesis 6: Activities undertaken by sub-state regional regulatory and non-regulatory authorities complement state floodplain management programs.

Historically and currently, the primary focus of each state program studied is on improving the capability of local NFIP community floodplain managers to implement the program effectively. This focus is reinforced annually through the CAP-SSSE funding mechanism for the program in each state. However, not all states have sufficient program budgets and thus resources to meet local, state, and federal floodplain management goals, such that there is the potential for a large role for sub-state authorities to improve outcomes. The case studies support Hypothesis 6, especially when states have very limited resources or limited involvement in certain aspects of state floodplain management. In those cases, sub-state authorities and/or the FEMA Regional staff tend to fill the void by shouldering additional responsibilities rather than merely reinforcing what already exists. State programs with weaknesses or gaps are supplemented by outside organizations.

Case study states such as Arizona show that the state role in the NFIP can be successful despite limited resources when other groups (county flood control districts in Arizona's case) are empowered to take responsibility. By default, AFMA has become the coordinating mechanism with the flood control districts and local governments in the state. The RPCs in Missouri have gradually become more involved in hazard mitigation planning at the local level after the state

identified a need to expedite the planning process. Influences from outside the state (e.g., FEMA regional staff) can improve the state program as well. In Texas, FEMA regional staff have stepped in to help the state fulfill minimum CAP-SSSE responsibilities such as Community Assistance Visits, that have overwhelmed state resources.

According to ASFPM members consulted for this report, state associations were formed to help solve issues of coordination and communication between state agencies and local communities, and to present a unified front to FEMA. However, these professional associations have also tended to take up the slack when states lack the resources to meet floodplain management goals. Professional associations tend to be strongest in states with moderately effective NFIP state programs. In these states, professional associations are very active and often will assist states in providing fundamental services to local communities such as training. Florida's effective floodplain management program adequately fulfills the state's needs; therefore, the Florida Floodplain Managers Association plays a much smaller role in the overall system of managing the state's expansive floodplains. Alternatively, the Texas Floodplain Management Association is extremely active and provides support to the state, specifically by increasing training opportunities and technical assistance.

The history of activities and assistance provided by the state associations is emblematic of problems encountered by state floodplain managers. This finding, combined with those above, affirm that a state's overall floodplain management program must be viewed as the sum total of all state activities, positive and negative, effective and ineffective, state-mandated or happenstance, provided by a combination of state agencies, sub-state authorities, and FEMA regions.

Hypothesis 7: The dependence of states on federal action hampers implementation of the NFIP.

The case studies prepared for this report indicated that the general structure of the relationship between federal, state and local community officials is nearly identical in every state. There were, however, individual nuances in each state indicative of the difficulties in perceiving and resolving similar problems. Based on the interviews for this study, there are several factors that appear to limit states from being as effective as possible. Interactions with FEMA regional staff were discussed in numerous interviews, and several common themes became evident. In many cases, neither FEMA regional staff nor state floodplain management staff felt they have ultimate responsibility to resolve compliance violations through enforcement actions. Lacking clear guidelines on how to handle violations at either the state or the federal level, responsibility may shift back and forth, sometimes resulting in little or no enforcement action being taken to firmly resolve violations. Frustration was evident among interviewees with both State and FEMA employees, and the issue presents a clear barrier to effective implementation of the sanctions available to FEMA to control compliance with NFIP standards.

Part A of the NFIP Evaluation study on community compliance (Monday *et al.* 2006) included similar conclusions regarding the NFIP's cooperative enforcement approach. It notes that considerable frustration with obstacles to implementation of the program can be found at both the state and federal levels. Several state officials interviewed for that report expressed annoyance that requests for information or assistance from FEMA often do not result in prompt

responses. The report further found that FEMA Natural Hazard Specialists have numerous responsibilities, only one of which is assisting a state with NFIP administration, and that duty assignments in disaster response also can lead to delayed responses and/or inconsistencies of policy interpretation. Monday *et al.* (2006) also question reassigning FEMA regional NFIP staff (whose positions are paid by flood insurance premium funds) to disaster duty, even temporarily, because disaster duty is a non-NFIP task.

As stated previously, FEMA officials indicated they feel that the existing federal-state-local partnership may have resulted in some state officials believing that states no longer need to take responsibility for floodplain management. Although frustration with the partnership is high among state officials interviewed and questions remain about ultimate responsibility for enforcement actions against noncompliant communities, state representatives did not share the belief that they no longer were responsible for floodplain management nor was it apparent that states have purposefully abdicated responsibility in any way.

4.2 Overall Conclusions

The background research and case studies have uncovered an NFIP with important imperfections. While previous research and surveys of NFIP state coordinators have demonstrated that there is a noticeable difference between effective and ineffective state floodplain management programs, the case studies clearly show that the disparity between them is growing. At the same time, neither effective nor less effective state programs are immune from legislative cutbacks. The result is that previous gains in floodplain management are threatened and citizens in states with less effective programs are being denied the benefits of flood protection promised by the NFIP. Furthermore, a healthy NFIP should not have to rely on sub-state regulatory and non-regulatory authorities to provide fundamental services when state floodplain management or legally assigned agencies cannot. Clearly, a problem exists, and it is likely that one cause is a failure in the NFIP to adequately incorporate states as significant partners. The NFIP obviously works better when states play a prominent role in the NFIP and in states where a strong federal-state-local partnership exists. The development of both should be encouraged through enhanced federal statutes.

5. RECOMMENDATIONS

The NFIP has been based primarily on a long-term relationship between the federal government and local communities that choose to participate. The state's role has been as a secondary assistant to the federal government in training and aiding local communities. Based on the conclusions reached in this study, major changes to the state role in the program should be made, and in a way that enhances the value of the state's contribution to the federal–state-local relationship and to assist states with making sure development undertaken by state agencies is compliant with NFIP requirements.

As stated previously, a state floodplain management program is the sum total of all state activities, whether or not they are positive, effective, or purposeful, including activities undertaken by a combination of state agencies, sub-state authorities, and FEMA regions. The recommendations below are directed toward specific entities, both public and private, for whom ability to implement will vary based on their specific situations. Recommendations for ASFPM are included in recognition of their role in advising all levels of the hierarchy affecting state floodplain management programs. Examination of the state programs indicates that measures that may prove successful in one state can be a failure in another; therefore, every recommendation is understandably not applicable in every state.

Each recommendation is based on background information and case studies, not a scientific sample or a comprehensive review of all programs. As a result, the recommendations are generalized from the information gathered. Such anecdotal information indicated avenues to pursue rather than details of potential programmatic changes. The recommendations reflect this fact and do not include detailed analyses of potential pros and cons or methods of implementation.

5.1 FEMA

5.1.1 Essential Actions

State Roles and Responsibilities Recommendation #1 (SR1): FEMA should initiate in partnership with the states a process to amend the NFIP to provide the states with a substantial role in the NFIP, to take advantage of state capabilities and land use authorities that reside with states. One consequence will be stronger states that will help ensure that floodplain management can guide development and redevelopment to be at lower risk from flooding and to prevent increases in flooding potential. The new requirements should accommodate currently effective states by providing incentives for the continued adoption of additional policies and tasks as well as less effective states by providing needed resources to build capacity. As there are many existing models in existing federal laws such as clean water and environmental protection that demonstrate how responsibilities are delegated to states, the process should include a comprehensive review of existing relationships to help establish the most satisfactory option. This recommendation should be implemented through convening a panel of stakeholders as soon as possible because changes to federal statutes typically require considerable time.

The following recommendations are intended to improve the current NFIP conditions. They are also ideas that can be incorporated into an enhanced statutory role for states.

SR2: Review, update, publish and enforce a comprehensive administrative process for addressing NFIP compliance violations in a systematic manner, beginning with identification of the violation and ending with final resolution. Each party to the compliance action must be knowledgeable of the process and acknowledge the deadlines. This process must include public disclosure of the compliance action. Similar recommendations resulting from the study on community compliance as part of the NFIP Evaluation (Monday *et al.* 2006) may be consulted for additional guidance on this issue.

SR3: Implement voluntary state Cooperating Compliance Partner (CCP) program modeled on FEMA's Cooperating Technical Partner (CTP) mapping program. The CCP Program would allow state agencies that have the interest and capability to become active partners in the NFIP by encouraging states to partner with FEMA in taking official action with regard to sanctioning communities. States would have to demonstrate the means and the authority to assume responsibilities as delegated by FEMA, recognizing that there may be gradations of partnerships based on a state's existing authorities. The program would allow participating states to resolve NFIP violations through: 1) working with the community to fix violations; 2) notifying the community of potential sanctions, and 3) enacting sanctions. CPP would make FEMA resources available to focus on other NFIP aspects. Changes to Federal NFIP regulations at 44 CFR may be necessary to allow FEMA to delegate more responsibility to the states. Other FEMA programs (*e.g.*, Hazard Mitigation Grant Program's Managing States concept) and other Federal agencies (*e.g.*, U.S. Environmental Protection Agency, Department of Transportation) may have state participatory program models that would prove useful in developing a CCP or similar program.

SR4: Assign FEMA Natural Hazard Program Specialists in the regional offices to State NFIP Technical Assistance duties only. Some specialists may, therefore, be assigned to more than one state; however, their duties would no longer be split between FMA, HMGP, and disaster response allowing them to become true specialists focused on providing prompt, consistent assistance and guidance to states. In order for individuals to gain knowledge from participating in multiple activities, a rotation system should be employed. Clarification as to whether FEMA regional NFIP staff can legally be assigned to non-NFIP duties while being paid with flood insurance premium funds should be accomplished immediately. Although this is understandably a sensitive issue within FEMA, consistent and quick FEMA regional response to issues of NFIP technical assistance must be the agency's primary consideration to support the goals of the program.

SR5: Improve the CIS, making it the single most valuable online tool for state officials to 1) access community claims information, 2) access FEMA policy interpretations through official and unofficial policy manuals, and 3) maintain community contact information. Several state officials expressed dismay with the CIS in general, but it was unclear from the interviews exactly what aspects are troublesome. Therefore, state officials are advised to communicate with their FEMA Regional offices to clarify problems and propose more specific solutions. The CIS has been under revision as an online tool for state officials in recent years, although not all of those changes are obvious yet to end users. Access to insurance data, such as Biennial Report data and

FIA claims data, is dramatically improved yet still not available to communities without a formal request to the state. State officials express a need for timely and up to date contact information for local NFIP administrators, and FEMA often lacks up to date information on community elected officials for official correspondence. Including this type of data on CIS and allowing editors and editing of community contact information by state and local officials would improve the usefulness of the CIS tool. Monday *et al.* (2006) includes a similar recommendation for revitalizing the CIS as a compliance tool because better record-keeping of community visits is necessary. See also SR8 for an additional suggestion for CIS.

5.1.2 Other High Priority Actions

SR6: At the region and headquarters levels, FEMA should accommodate state regionalization of floodplain management tasks by streamlining communication from state regions to the FEMA region. Regionalization refers to the delegation of state responsibilities to multiple field offices, district or regional offices. FEMA can do this by accommodating a single, direct state link to the FEMA Region and encouraging states to consider regionalizing staff when sufficient staff are available. Several states may never have the resources necessary to regionalize including sufficient personnel to staff a headquarters operation and multiple regional offices. Each state must balance economies of scale versus the benefits of regionalization.

SR7: FEMA should institute a two-tiered staffing requirement for states based on the number of NFIP communities in the state. Each state is currently encouraged by the CAP-SSSE agreement to employ at least one full-time employee, dedicated to NFIP tasks and funded through CAP. A threshold of 300 NFIP-participating communities, for instance, would trigger a *new requirement* for an additional CAP-funded full-time employee for NFIP tasks. This recommendation would alter the staffing levels of states with large numbers of participating communities, enhancing their ability to provide technical assistance to more communities each year and increasing the number of CAVs and CACs conducted. An alternative recommendation reviewed as part of this study was allowing states to contract CAV responsibilities out to private contractors. According to FEMA officials, FEMA has discouraged contracting of CAVs because it is generally proposed in weak states that will never develop in-house capabilities if they contract out these services.

5.1.3 Medium Priority

SR8: Use the internet to open the lines of communication between FEMA regions and all state agencies and staff. Reinstate an on-line NFIP Policy Manual for states and Regions and create a question and answer blog for the benefit of all readers. FEMA's recent strategy has been to incorporate information from an older policy manual into other guidance documents available to communities, such as FEMA 480 and the various technical manuals. These guidance documents generally did not exist when the original policy manual was issued. The states expressed a need, and FEMA has acknowledged a need for some formal mechanism for providing those policies that are not appropriate for inclusion in more formal publications.

5.2 ASFPM

5.2.1 Essential Actions

SR9: Continue to support the formation of state associations and chapters of the ASFPM. In 2002, there were 32 states with associations, including several states which participate in regional associations (ASFPM 2002). According to the August 2006 ASFPM web site, there are 41 states with associations. As shown in this report and ASFPM 2002, the associations play a critical role in supplementing the resources of states and communities, and in providing a non-governmental, peer-to-peer information source. Individual state chapters, rather than multiple state associations, appear to be more effective at helping train community officials to become knowledgeable at integrating various programs related to reducing flood losses, and targeting specific activities that need to be addressed in a state, such as lobbying for legislation or providing state-regulation specific training to specific audiences. FEMA should also continue supporting these associations to the degree possible by providing speakers, hosting workshops, and recognizing contributions and feedback from association leaders.

SR10: Aggressively publicize the CFM program to local communities where floodplain managers may not be aware of the ASFPM, to colleges and universities with hazard programs, to a multitude of state agencies only peripherally involved in state floodplain management, and to high level state officials who have the ability to influence the required credentials for state floodplain managers. These actions will improve state programs by enhancing state and local capability and attracting interested college graduates to the field. ASFPM should continue to enlist FEMA's support for the CFM program through resources and added training programs which increase the level of knowledge for floodplain managers.

5.3. State Officials

5.3.1 Essential Actions

SR11: As evidenced by the conclusions of this report, state floodplain management responsibilities extend beyond the day-to-day tasks of the State NFIP Coordinator. State elected officials, legislators, agency directors, and departmental liaisons each have a responsibility to support the state's overall program of floodplain management by ensuring that the State Coordinators have tools essential to their jobs. One example might be funding an inventory of state buildings in the floodplain and ensuring the state's self-insurance status for flood damage. Armed with this essential knowledge, as well as a frank program assessment of the state's strengths and weaknesses, the State Coordinator is prepared to take advantage of windows of opportunity, such as flood disasters or changes in administration. Also, the state can more effectively fulfill its role in the NFIP partnership.

SR12: Integrate state-level environmental reviews of floodplain projects into local government permitting processes. This recommendation is particularly relevant for local communities with efficient permitting processes and heavy development pressure. Streamlined procedures for permitting and increasingly knowledgeable local permit officials result in better projects with more careful consideration of a range of hazards and impacts.

5.3.2 Other High Priority Actions

SR13: Implement agency policy to require that state staff receive CFM certification from the ASFPM and provide funding for staff to take advanced training courses in floodplain management-related topics. State staff must be recognized experts in the field. Provide training for other state agencies to allow development of a cadre of CFMs in various agencies who can coordinate actions to ensure effective implementation of state policies for floodplain development.

SR14: Explore the concept of sub-state regionalization for state staff. If geographical relocation of staff is not feasible, dividing staff responsibilities based on regions may be as effective. Ensure that staff relocated to regional offices still report to headquarters.

SR15: Take advantage of the capabilities of sub-state authorities such as ASFPM chapters, professional associations, councils of government, regional planning districts, and FEMA regional staff to ensure that all state program goals are met.

5.2.3 Medium Priority

SR16: Create career tracks for state floodplain management staff, especially technical staff such as engineers.

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6. APPENDICES

Appendix 1

[Code of Federal Regulations]
 [Title 44, Volume 1]
 [Revised as of October 1, 2000]
 From the U.S. Government Printing Office via GPO Access
[CITE: 44CFR60.11]

[Page 262]

TITLE 44—EMERGENCY MANAGEMENT AND ASSISTANCE

CHAPTER I—FEDERAL EMERGENCY MANAGEMENT AGENCY

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE—Table of Contents

Subpart B—Requirements for State Flood Plain Management Regulations

Sec. 60.11 Purpose of this subpart.

(a) A State is considered a "community" pursuant to Sec. 59.1 of this subchapter; and, accordingly, the Act provides that flood insurance shall not be sold or renewed under the Program unless a community has adopted adequate flood plain management regulations consistent with criteria established by the Administrator.

(b) This subpart sets forth the flood plain management criteria required for State-owned properties located within special hazard areas identified by the Administrator. A State shall satisfy such criteria as a condition to the purchase of a Standard Flood Insurance Policy for a State-owned structure or its contents, or as a condition to the approval by the Administrator, pursuant to part 75 of this subchapter, of its plan of self-insurance.

[41 FR 46975, Oct. 26, 1976. Re-designated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

Appendix 1, Continued

[Code of Federal Regulations]

[Title 44, Volume 1]

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[CITE: **44CFR60.12**]

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TITLE 44—EMERGENCY MANAGEMENT AND ASSISTANCE

CHAPTER I—FEDERAL EMERGENCY MANAGEMENT AGENCY

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE—Table of Contents

Subpart B—Requirements for State Flood Plain Management Regulations

Sec. 60.12 Flood plain management criteria for State-owned properties in special hazard areas.

(a) The State shall comply with the minimum flood plain management criteria set forth in Secs. 60.3, 60.4, and 60.5. A State either shall:

(1) Comply with the flood plain management requirements of all local communities participating in the program in which State-owned properties are located; or

(2) Establish and enforce flood plain management regulations which, at a minimum, satisfy the criteria set forth in Secs. 60.3, 60.4, and 60.5.

(b) The procedures by which a state government adopts and administers flood plain management regulations satisfying the criteria set forth in Secs. 60.3, 60.4 and 60.5 may vary from the procedures by which local governments satisfy the criteria.

(c) If any State-owned property is located in a non-participating local community, then the State shall comply with the requirements of paragraph (a)(2) of this section for the property.

Appendix 1, Continued

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TITLE 44—EMERGENCY MANAGEMENT AND ASSISTANCE

CHAPTER I—FEDERAL EMERGENCY MANAGEMENT AGENCY

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE--Table of Contents

Subpart B—Requirements for State Flood Plain Management Regulations

Sec. 60.13 Noncompliance.

If a State fails to submit adequate flood plain management regulations applicable to State-owned properties pursuant to Sec. 60.12 within six months of the effective date of this regulation, or fails to adequately enforce such regulations, the State shall be subject to suspensive action pursuant to Sec. 59.24. Where the State fails to adequately enforce its flood plain management regulations, the Administrator shall conduct a hearing before initiating such suspensive action.

[41 FR 46975, Oct. 26, 1976. Re-designated at 44 FR 31177, May 31, 1979, as amended at 48 FR 44552, Sept. 29, 1983; 49 FR 4751, Feb. 8, 1984]

Appendix 1, Continued

[Code of Federal Regulations]
 [Title 44, Volume 1]
 [Revised as of October 1, 2000]
 From the U.S. Government Printing Office via GPO Access
 [CITE: **44CFR60.25**]

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TITLE 44—EMERGENCY MANAGEMENT AND ASSISTANCE

CHAPTER I—FEDERAL EMERGENCY MANAGEMENT AGENCY

PART 60—CRITERIA FOR LAND MANAGEMENT AND USE--Table of Contents

Subpart C—Additional Considerations in Managing Flood-Prone, Mudslide (i.e., Mudflow)-Prone and Flood-Related Erosion-Prone Areas

Sec. 60.25 Designation, duties, and responsibilities of State Coordinating Agencies.

(a) States are encouraged to demonstrate a commitment to the minimum floodplain management criteria set forth in Secs. 60.3, 60.4, and 60.5 as evidenced by the designation of an agency of State government to be

responsible for coordinating the Program aspects of flood plain management in the State.

(b) State participation in furthering the objectives of this part shall include maintaining capability to perform the appropriate duties and responsibilities as follows:

(1) Enact, whenever necessary, legislation enabling counties and municipalities to regulate development within flood-prone areas;

(2) Encourage and assist communities in qualifying for participation in the Program;

(3) Guide and assist county and municipal public bodies and agencies in developing, implementing, and maintaining local flood plain management regulations;

(4) Provide local governments and the general public with Program information on the coordination of local activities with federal and state requirements for managing flood-prone areas.

(5) Assist communities in disseminating information on minimum elevation

Appendix 1, Continued

requirements for development within flood-prone areas;

(6) Assist in the delineation of riverine and coastal flood-prone areas, whenever possible, and provide all relevant technical information to the Administrator;

(7) Recommend priorities for Federal flood plain management activities in relation to the needs of county and municipal localities within the State;

(8) Provide notification to the Administrator in the event of apparent irreconcilable differences between a community's local flood plain management program and the minimum requirements of the Program;

(9) Establish minimum State flood plain management regulatory standards consistent with those established in this part and in conformance with other federal and state environmental and water pollution standards for the prevention of pollution during periods of flooding;

(10) Assure coordination and consistency of flood plain management activities with other State, area-wide, and local planning and enforcement agencies;

(11) Assist in the identification and implementation of flood hazard mitigation recommendations which are consistent with the minimum floodplain management criteria for the Program.

(12) Participate in flood plain management training opportunities and other flood hazard preparedness programs whenever practicable.

(c) Other duties and responsibilities, which may be deemed appropriate by the State and which are to be officially designated as being conducted in the capacity of the State Coordinating Agency for the Program, may be carried out with prior notification of the Administrator.

(d) For States which have demonstrated a commitment to and experience in application of the minimum flood plain management criteria set forth in Secs. 60.3, 60.4, and 60.5 as evidenced by the establishment and implementation of programs which substantially encompass the activities described in paragraphs (a), (b), and (c) of this section, the Administrator shall take the foregoing into account when:

(1) Considering State recommendations prior to implementing Program activities affecting State communities;

(2) Considering State approval or certifications of local floodplain management regulations as meeting the requirements of this part.

[51 FR 30309, Aug. 25, 1986]

Appendix 2

FY 2006 CAP-SSSE Guidance

This guidance updates the Community Assistance Program – State Support Services Element (CAP-SSSE) guidance issued in FY 2005. While the basic program elements have essentially stayed the same, there are some new procedures to follow in FY 2006, as described below.

I. Purpose of CAP-SSSE: The purpose of this program is to provide, through a State grant mechanism, a means to ensure that communities participating in the National Flood Insurance Program (NFIP) are achieving the flood loss reduction goals of the NFIP. CAP-SSSE is intended to accomplish this by funding States to provide technical assistance to NFIP communities and to evaluate community performance in implementing NFIP floodplain management activities with the additional goal of building State and community floodplain management expertise and capability.

II. Authorities and Background: The CAP-SSSE Program derives its authority from the National Flood Insurance Act of 1968, as amended, the Flood Disaster Protection Act of 1973, and from 44 CFR Parts 59 and 60. The National Flood Insurance Act of 1968 prohibits the Director from providing flood insurance in a community unless that community adopts and enforces floodplain management measures that meet or exceed minimum criteria in 44 CFR Part 60.3. These floodplain management measures can take the form of floodplain management ordinances, building codes, or zoning provisions. The Act also directs FEMA to work closely with and provide any necessary technical assistance to States and communities participating in the NFIP. CAP-SSSE through its State partnering agreement is designed to make State personnel available to assist and supplement FEMA Regions in providing technical assistance to NFIP communities and in monitoring, evaluating, and pursuing corrective actions by communities in the performance of local floodplain management responsibilities. State officials can be particularly effective in delivering these services to communities due to their knowledge and familiarity with State governing authorities and how these interrelate with local floodplain management ordinances as well as their knowledge of related State programs.

III. Processes: FEMA Regional Offices and the designated State agency negotiate a CAP-SSSE Agreement (Agreement) that specifies activities and products to be completed by a State in return for CAP-SSSE funds. In addition, since 2005, each State is required to develop a Five-Year Floodplain Management Plan (Five-Year Plan) describing the activities to be completed using CAP-SSSE funding as well as how the required performance metrics will be met. The Agreement is intended to reflect the Five-Year plan, FEMA's needs, and the State's role in providing technical assistance to communities, evaluating community performance and, where possible, should integrate the expertise of the State on how best to build and maintain community floodplain management capability. The Agreement is subject to amendments and modifications when approved by both parties. Performance standards that address quality of service are to be developed and measured. The CAP-SSSE Agreement is not intended to fund all floodplain management activities undertaken by the State NFIP Coordinating Agency, only those activities that the Region identifies. States are expected to continue to perform other duties and responsibilities of the State NFIP Coordinating Agency and support State floodplain management programs and initiatives using their own resources and funding.

Appendix 2, Continued

FY 2006 CAP-SSSE Guidance

IV. Performance Measurement Development: FEMA created a CAP-SSSE Workgroup in the early part of 2004 that consisted of FEMA Headquarters and Regional personnel, representatives from the Association of State Floodplain Managers (ASFPM), State agencies, and the National Service Provider (NSP). The Workgroup designed an outline for the Five-Year Plans, and established NFIP performance metrics that will be used to evaluate CAP-SSSE activities. This outline was presented at the annual ASFPM conference in Biloxi, Mississippi, in May 2004. States were required to have their Five-Year Plans completed by September 30, 2004, so that the plans could be implemented in FY 2005. During 2005, the Five-Year Plans were submitted, reviewed, and summarized. The Regions were given both Regional Summaries and State Summaries of these initial plans, with assistance from the NSP. These summaries included checklists to provide States with feedback for use in developing their FY 2006- FY 2010 plans.

V. Eligible Activities and Requirements: Regional Offices are to determine the appropriate levels of effort in each activity to ensure that performance metrics are being met. FEMA is requiring certain metrics, and encouraging others, for some of the CAP-SSSE activities as described below.

1. **Performance Measurement/Five-Year Plan Updates:** The performance measure that FEMA must meet under the Flood Map Modernization Initiative is as follows: **“Ensure that a minimum of 93 percent of communities adopt their flood maps by the FIRM effective date.”** Therefore, all State Five-Year Plans **must** contain a performance measure that is equal to or more stringent than the FEMA requirement. This means that States must include a mandatory adoption metric of 93 percent or higher in their Five-Year Plans starting in FY 2006.
 - a. **Additional Performance Metrics** - FEMA strongly encourages States to adopt the performance measure “Increase the percentage communities that adopt the new flood maps prior to the 30-day letter being sent.” Regions are encouraged to develop incentives for States to adopt and successfully implement this performance measure. *[Please note: 30-day letters are now sent out 60 days prior to the map effective date so early coordination is required to meet this metric.]*
 - b. **Workload Changes** – Flood Map Modernization and the need to provide NFIP-related post-disaster assistance have significant impacts on projected State workloads. The Mapping Information Portal (MIP) www.hazards.gov should be consulted when developing and updating the FY 2006 plans. On the MIP, FEMA's Multi-Year Flood Hazard Identification Plan (MHIP) is available on the MIP and should be reviewed as part of the CAP-SSSE Five-Year Planning process. The MHIP provides schedules and projections of which communities will be mapped (restudies, digital conversions, etc.) by fiscal year. In addition, the Community Assistance Section (CAS) at FEMA Headquarters provided the Regions with Map Adoption Lead Time (MALT) charts based on MHIP projections. Regions and States must use these tools to understand and assign workload priorities and coordinate CAP-SSE activities with Flood Map Modernization Management Support (MMMS) grant activities. States should work with the Regions to continually review their workload as related to Flood

Appendix 2, Continued

FY 2006 CAP-SSSE Guidance

Map Modernization and applicable post-disaster activities and update their Five-Year Plans as new data are available.

- c. Gap Analysis/Best Practices – With assistance from the NSP, FEMA provided MALTs to the States to assist them in conducting a gap analysis. The Regions can call upon the NSP to assist in updating the MALTs as needed. Additionally, FEMA urges States to consult ASFPM's *Effective State Programs* and *Floodplain Management 2003: State and Local Programs*, for examples of best practices in floodplain management, gap analysis methods, and self-evaluations that can be performed by States at www.floods.org/. The Five-Year Plans should document any best practices that the State is undertaking using CAP-SSSE funds.

- 2. **State Model Ordinance Research and Development:** In preparation for Flood Map Modernization, States and Regions must get ready for the large number of communities that will be required to adopt a compliant ordinance to avoid suspension from the NFIP. Therefore, at the discretion of the Regional Office, States must develop or update their State model floodplain management ordinance and have it approved by the Regional Office. The State model ordinance must contain the minimum requirements outlined in 44 CFR Section 60.3 and contain any State related floodplain management provisions.

- a. Adoption of Digital Data - Section 107 of the Flood Insurance Reform Act of 2004 states that for the purposes of flood insurance and floodplain management, FEMA digital flood hazard data and paper maps are interchangeable and legally equivalent provided that they meet FEMA accuracy standards. States are encouraged to consult with their State Attorney General to ascertain whether digital data may be adopted in lieu of paper maps, and to share their findings on this issue with their Regional Office. In turn, the Regions will inform CAS as information on adoption of digital data become available from the States.
- b. Automatic Adoption - NFIP regulations require that community floodplain management regulations be legally enforceable. This includes adopting the current revised FIRM and FIS. Many State and Regional model ordinances have a provision in the ordinance that allows for flood map revisions to be automatically adopted. Many State model ordinances have provisions adopting the current FIRM and FIS and "all subsequent revisions." The purpose of these provisions is to avoid the need to amend community floodplain regulations each time the FIRM is revised. This practice may not be legal in all states since it may violate due process or procedural requirements of state enabling legislation. If a State wants to include this provision in their model ordinance or has communities that have adopted this provision, they must obtain a legal review to determine if the provision is legal in their State. They can use their in-house counsel or request their State Attorney General to conduct a legal review of this provision to whether it complies with enabling legislation and constitutional requirements. The State legal opinion may be very important for future development and consistency in FIRM adoption. States that do not have this provision in their model ordinance and do not have communities using this provision do not have to take further

Appendix 2, Continued

FY 2006 CAP-SSSE Guidance

action. The FY-2004 CAP-SSSE Guidance required that State Coordinators have their State model ordinances evaluated by their State Attorney General's Office to ensure that the automatic adoption of flood maps is legal in their State. Many States have either not yet completed this activity, or have provided information that is vague and inconclusive. In the absence of a clear, concise, legal opinion stating that automatic adoption is legal in any given State, FEMA will assume that automatic adoption is not legal in that State. The results of the opinions received so far were provided to the Regions and will be updated as more opinions are submitted. If there are any questions about this, please do not hesitate to call Mike Grimm, CAS Section Chief, at FEMA Headquarters.

- c. **Model Building Codes** - More and more communities are adopting a model building code (i.e., the International Building Code and other I-Codes or the National Fire Protection Association Building and Safety Code), which contains the minimum flood resistant design and construction requirements of the NFIP. States are encouraged to consult the document, "*Reducing Flood Losses Through the International Code Series: Meeting the Requirements of the National Flood Insurance Program.*" This document will assist States when reviewing floodplain management regulations in communities that have adopted one of the model building codes. It can also be used to compile a guidance package for communities that may want to meet the minimum NFIP regulatory requirements through a combination of building codes, zoning requirements, etc.

3. **Ordinance Assistance:** States participating in CAP-SSSE must assist communities in developing and adopting floodplain management ordinances that comply with the NFIP. This includes necessary ordinance revisions based upon new hazard data provided by FEMA as well as incorporating any future changes in NFIP floodplain management criteria. If a Regional Office is not requiring State involvement in the ordinance revision process, Five-Year Plans must say the Regional Office has the lead on ordinance revisions and is ultimately responsible for ensuring that the flood maps are adopted. In cases where a State has not assumed responsibility for the ordinance revision process, this item must be specifically identified in the State Five-Year Plan Gap Analysis.
4. **Entering Floodplain Management Data in the Community Information System (CIS):** Regional Offices are to ensure that all information is entered into CIS. Regions should require States to update and enter information into the CIS as part of their reporting requirements under the agreement. This is to include entering information on ordinance adoption, Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs), training, general technical assistance, and updating all other fields they are authorized to update. FEMA Headquarters uses CIS to determine whether communities have adopted compliant ordinances and will make decisions to suspend communities based primarily on checking the CIS ordinance screen. Therefore, as communities adopt new flood maps it is imperative that States and Regions enter the necessary information into CIS in a timely manner. This will become increasingly important as CIS will be enhanced and used to update the MIP in the near future.

Appendix 2, Continued

FY 2006 CAP-SSSE Guidance

5. **Community Assistance Visits and Community Assistance Contacts:** States participating in CAP-SSSE are required to conduct CAVs and CACs. The Regions will work with each State to determine the number and location of CAVs and CACs to be performed each year. Regions and States are encouraged to make maximum use of the CAC process and other contacts with communities to identify potential compliance problems and needs for technical assistance. States are required to provide appropriate follow-up to CAVs and CACs by providing technical assistance to correct program deficiencies and remedy violations to the maximum extent possible. States must coordinate with Regions, as necessary, to clarify what follow-up is to be provided. States are expected to refer community compliance problems that they are unable to resolve to the Regional Office. FEMA Manual 78104.4, *National Flood Insurance Program Guidance for Conducting Community Assistance Contacts and Community Assistance Visits*, August 1989, provides guidance on planning for, conducting and providing follow-up for these activities. Regions are also encouraged to use the CAV/Compliance Course CD that was distributed in 2004 for additional assistance in preparing for and conducting CAVs. All CAVs and CACs are required to be entered into CIS so that FEMA can monitor this important floodplain management activity.
6. **Outreach, Workshops, and Other Training:** States are encouraged to conduct outreach, workshops, and other training for local officials to support implementation and enforcement of community floodplain management regulations, to promote hazard identification, and local and State planning initiatives. States should conduct workshops and other training and outreach opportunities on a schedule and at locations that are coordinated with the FEMA Region, and outlined in the Five-Year Plan. States are permitted to use CAP-SSSE funds to allow State employees that are involved in floodplain management activities to take the ASFPM Certified Floodplain Manager (CFM) exam. CAP-SSSE funds can be used to cover initial exam and biannual CFM renewal fees. However, individual ASFPM membership fees are not covered by CAP-SSSE funding. States are encouraged to sponsor and proctor CFM exams in coordination with ASFPM. Later in FY 2006, States may be required to enter outreach and training information into CIS as new screens are developed for this purpose.
7. **General Technical Assistance:** States are encouraged to provide general technical assistance to communities and individuals to resolve floodplain management issues related to the NFIP. General technical assistance also includes assisting communities in joining the NFIP Community Rating System (CRS) and in undertaking activities credited by CRS.
8. **Mapping Assistance:** As part of the Flood Map Modernization process, States must work with the Regions to develop flood mapping priorities, scope flood hazard studies, and participate in community meetings held as part of the mapping process. In addition to CAP-SSSE grants, States are eligible for MMMS funding to meet these Flood Map Modernization responsibilities. The CAP-SSSE plans must be developed separately from but in coordination with the MMMS plans to ensure that MMMS is used to supplement CAP-SSSE activities and that States will meet all of their responsibilities under Flood

Appendix 2, Continued

FY 2006 CAP-SSSE Guidance

Map Modernization. Neither MMMS nor CAP-SSSE funds can be used for conducting floodplain studies or developing floodplain maps.

9. **Coordination with Other State Programs and Agencies:** States are encouraged to coordinate with other State administered programs that impact floodplain management such as the Flood Mitigation Assistance Program, the Hazard Mitigation Grant Program, the Pre-Disaster Mitigation Program, the State Dam Safety Program, and other State land use and water resources programs including periodic meetings among State agencies. Coordination with other State agencies on adoption and implementation of State Executive Orders and regulations that meet State NFIP requirements is also encouraged.
10. **Assistance to Communities in Responding to Disasters:** States are encouraged to provide post disaster assistance and support to NFIP communities. Examples of these activities include: technical assistance implementing substantial damage requirements, including use of the Substantial Damage Estimating Software; assistance to communities enrolling into the NFIP; general floodplain management technical assistance; assistance with the promotion and use of the NFIP Increased Cost of Compliance (ICC) coverage, and assistance with a variety of hazard mitigation initiatives. Generally, these activities are not included in the annual CAP-SSSE Agreement, but negotiated if and when a disaster occurs. The CAP-SSSE Agreement must be modified to reflect these changes.

VI. Reporting Requirements: States are required to report at least semi-annually to the Regions to demonstrate progress in meeting agreed upon performance measures contained in the Five-Year Plans. Some Regions may require quarterly reporting to satisfy unique Regional grants management requirements. Regions are held accountable for funds expended through CAP-SSSE and must require that their States document work so that progress can be tracked. States are expected to cooperate with Regions by submitting documentation or other evidence that demonstrates completion of approved activities. States must provide a final status report on meeting their performance measures to the Region by December 30, 2006. These reports will be developed in close coordination with the CAP-SSSE Workgroup, FEMA Regions, and the NSP.

Regions will provide CAS at FEMA Headquarters with an end of fiscal year progress report that will be due no later than January 30, 2007. The end of year report will address State progress in meeting established performance measures. The format for this annual report will be discussed in by the CAP-SSSE Workgroup and forwarded to the Regions in the 4th quarter of FY-2006. The Regional Office and the States will work closely with the NSP to generate this yearly report.

VII. Other Information: CAP-SSSE funds are restricted in their use. They can only be used for activities that support the NFIP by fostering effective floodplain management programs in participating communities and providing assistance to non-participating communities in enrolling in the NFIP.

States are encouraged to have at least one full time person dedicated to CAP-SSSE or other floodplain management activities to help maintain this expertise and capability. FEMA highly encourages state floodplain management personnel to attain CFM credentials and CAP-SSSE funds may be utilized for this purpose. If a State does not have the necessary expertise and capability to conduct CAP-SSSE activities, the Region and State are required to develop a

Appendix 2, Continued

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remedial plan. If at the conclusion of the plan, the necessary expertise and capability has not been developed by the State, the following year's CAP-SSSE funding can be reduced or withheld.

There is a 25 percent non-federal match for all States receiving CAP-SSSE funds. As long as CAP-SSSE continues and a State maintains skill capability and meets performance goals, a State should expect to receive funding. However, annual funding levels may vary depending on needs, State capability, performance, and Regional priorities.

The Regional Office will also be required to provide weekly grant allocation reports to FEMA Headquarters for subsequent reporting to DHS.

VIII. Funding Distribution: See attachment.

Appendix 3

NFIP Evaluation State Agency Study
Protocol for State Floodplain Management Offices
 Conducted by
 American Institutes for Research

I. Interview Topics and Probes

1. It OK to record our conversation today to make sure we capture your ideas accurately?
2. How long you have been involved with this program? Agency?
3. Are there any documents or organizational charts we should get copies of that explain your agency's and program's organization?

A. State floodplain management – General Issues

4. We've already looked at the hazard mitigation plan, but just to make sure we've understood it completely, broadly speaking, what type of activities does your office undertake regarding floodplain management?
5. How long has the program been located in this department/agency?
 - a) Why was it located here?
6. Are there any ways that your program's location within your agency might help or hurt the program?
 - a) Does its location within this agency insulate it from or expose it to political or budgetary changes over time?

Institutional and Legal Characteristics

7. How is your program's authority established?
 - a) Are there any relevant Governors' Executive Orders?
8. Do you think the source of your program's authority affects its success?
9. What does your authority not allow you to do, if anything, with respect to private sector development?
10. Is there a state law requiring review of proposed activities that modify the floodplain? At what level of government is that review required?
11. Is there any other legislation that affects floodplain management in your state?
12. Are there any particularly effective *regulations* that your program includes that may be models for other states?
 - a) Do *other states* have any regulations that your program could use?
13. Are there any particularly effective *laws* that your program includes that may be models for other states?
 - a) Do *other states* have any laws that your program could use?
14. Is there something about your program's legal or regulatory structure that could be changed or formalized to improve it?
15. Is there a dedicated fund that helps provide funding for your program?
16. Some people talk about time periods after a major flooding event during which the public and legislature are concerned about flooding and during which changes are more likely. If someone were to put together a package of recommendations for other states after a

Appendix 3, Continued

major flood event including organizational, regulatory, and legal changes, what would you suggest they include?

State Program Activities

17. Are there any particularly effective *activities* that your program does that may be models for other states?
 - a) Do *other states* have any activities that might help your program?
18. In your opinion, do your program's actions fully satisfy the responsibilities for state coordinating programs of the NFIP, set forth by the CFR?
 - a) Do they go beyond them?
19. Which, if any, additional activities would you prioritize with additional financial resources and staff members? How much additional resources would be needed to do so?
20. Can you discuss specifically what, besides funding and staffing levels, might be needed to enhance your office's role in floodplain management?

Overall Structure of Floodplain Management Responsibilities Across Agencies

21. Could you outline for me the structure of floodplain management activities in your state in terms of agencies and programs?
 - a) About what issues are you in contact and how frequently?
 - b) Which agencies or programs are most important to floodplain management in your state?
 - c) For the purpose of further interviews, who from these agencies would you recommend we contact regarding their activities?
 - d) Does your state have programs on the following issues, and if so, in which agencies are they located? wetlands, high-risk erosion, coastal or shoreland management.
22. Why did the institutional arrangements in your state take this pattern?
23. What tradeoffs for floodplain management are there in these programs being located in their respective agencies/departments in your state?
24. What do you believe would be the best arrangement of floodplain management and mitigation responsibilities across a state?

B. Coordination with Other State-Level Agencies

Mitigation Programs

25. Could you describe the way hazard mitigation programs are handled in your state and your interactions with them?
26. If not responsible for administering any,
 - a) What role does your agency have in HMGP or FMA decisions or in review of local applications for mitigation grants?
 - b) Are any other agencies besides emergency management involved in the review process?
 - c) What roles are or would be most important for your office to play?
 - d) Does coordination differ following a disaster?

Appendix 3, Continued

27. If responsible for administering HMGP or FMA,
- a) Are mitigation programs administered alone or in coordination with another agency?
 - b) What percentage of Federal mitigation funding goes towards flood-related mitigation as opposed to mitigation for other natural disasters?
 - c) Does the state do anything to meet HMGP “Enhanced Plan” requirements?
28. If responsible for administering state,
- a) Are mitigation programs administered alone or in coordination with another agency?
 - b) If so, what is the source of the funding?
 - c) How do the criteria or goals for this fund differ from federal mitigation programs?
29. If administer either state or federal
- a) What programs or agencies play a role in planning, reviewing, prioritizing, or coordinating local applications for mitigation grants?
 - b) What programs or agencies are in charge of long-term disaster recovery?
 - c) How are projects that reduce future flood events and damages during recovery handled relative to projects focused on immediate recovery?
30. Is there a Hazard Mitigation Council or similar coordinating body in the state?
- a) If so, what authority does this body have and how is that authority established?
 - b) If voluntary, does the lack of formal authority create any problems?
 - c) If from Executive Order, have changes of administration affected the council’s effectiveness?
 - d) What types of coordination does your office have with this body during flood mitigation planning? If none, has this created any problems?
 - e) Who would you recommend we contact regarding their activities?
 - f) How would we obtain a copy of the documents authorizing its functioning?
31. What agency is in charge of long-term disaster recovery?
- a) Does your office participate in these plans?
 - b) Is there some mechanism that assures that mitigation projects during recovery prioritize reduction of future flood events and damages?
32. Does the state have a dedicated fund for mitigation projects?

Coordination with Other State-Level Agencies – General

33. Is the role of your office well understood by other state agencies?
34. What would you recommend to improve impacts on floodplain management by other state agencies or programs?
35. How helpful do you think additional coordination and interaction would be with other state agencies or programs?
36. Does your office correspond regularly with other agencies regarding floodplain management activities?

Appendix 3, Continued

C. Coordination with Sub-state Authorities, FPA, Other States, Communities

State Association

37. Is there an active state floodplain management association in your state?
- What interactions or coordination does the program have with the association?
 - Who would you recommend we contact there?
 - Is there anything else you could imagine that the association could do or that you could do with them to improve floodplain management in your state?

Other States

38. Do you have any agreements with floodplain management programs in other states?
- Does your state have any post-disaster mutual aid agreements with other states?

Sub-state/Regional Authorities

39. Are there any sub-state (regional) authorities, such as regional water districts, flood districts, or planning district commissions that affect floodplain management or floodplain regulation?
- What's their role?
 - What's their source of funding?
 - What interactions does the program have with them? How frequent?
 - What are the advantages or disadvantages to having them responsible for some floodplain management activities?
 - Would it be helpful if their role changed?
 - What would you recommend, if anything, to improve coordination with them?
 - Who should we get in contact with about their activities?
40. Do you think it would help if there were sub-state (regional) authorities, such as regional water districts, flood districts, or planning district commissions in your state?

D. Compliance, Training, and Coordination and Division of Responsibilities with FEMA Compliance

41. What does the program do to improve community compliance?
- What does the program do to increase enrollment in the NFIP?
 - What gets in the way of increasing enrollment?
42. What role does your office play in follow-up to violations?
43. How are follow-up efforts coordinated with the FEMA regional office?
44. How well does the division of responsibility work between FEMA and your office for compliance activities?
- Are there other ways these responsibilities could be divided? What are the tradeoffs?
45. What do you think is the best division of responsibilities between the state and FEMA regional office for other activities?
46. What might increase the effectiveness of your compliance activities?

Appendix 3, Continued

47. Are other needs of communities being met?
 - a) What could be done to support their needs better?
48. What interactions besides compliance do you have currently with FEMA's regional offices?
 - a) How productive are these interactions?
49. What interactions, if any, do you have currently with FEMA's *headquarters*?
50. How well does the division of responsibility work between FEMA and your office for activities other than compliance?
 - a) Are there other ways these responsibilities could be divided?
51. Are there other ways coordination with FEMA could be improved?
52. What other federal agencies have you had extended interactions with about floodplain management or the NFIP? (Examples: NRCS, Corps of Engineers, USGS, NWS)

For which agencies have the contacts been the most involved?

E. Development and Review Processes by State Agencies

Coordination with Other State Level Agencies – Development-related

53. To what extent are state buildings and projects within the state compliant with NFIP or state regulatory requirements?
54. Is development and related planning by state agencies managed by a single state agency, like a Department of Administration or General Services Administration, or is development the responsibility of individual agencies?
 - a) If yes, who would you recommend we contact regarding their activities?
55. Does your office have authority or responsibility for ensuring state agencies' compliance with local, state, or federal floodplain management requirements?
56. Is there another agency or department that oversees whether state construction takes into account flood risk or the effect of the development on flood-prone areas?
 - a) How are proposals for state developments in SFHAs handled?
 - b) Is the local jurisdiction responsible for approving state- or federal-level developments?
 - c) Have you heard of instances in which the community denied a permit to a state or federal agency?
 - d) Do you sense that they feel they have real authority to deny or require changes before issuing a permit?
 - e) Is there a state law requiring review of activities proposed by state agencies?
57. How, if at all, are you made aware of development by other state agencies that affect floodplains?
 - a) At what stage of projects?
 - b) Is this required systematically?
 - c) Do you have written guidance to provide them?

Appendix 3, Continued

- d) Do you have a protocol to follow if you find out that an agency's proposing development in a floodplain without adequate consideration of flood risk?
 - e) Has your office ever conducted a compliance activity (such as a CAV) with a state agency?
58. When state agencies plan a development that affects the SFHA, do any incentives exist to meet the minimum floodplain management requirements? To exceed it?
- a) Are these incentives effective?
59. Would you need additional authority to monitor the activities of other state agencies?
60. Do you have written guidance for other state agencies regarding their activities that affect floodplain management?
61. Has your office affected the development process of other state agencies? How? Can you provide specific examples?

Review Processes

62. Do any other state agencies have an individual or office explicitly designated to consider floodplain issues?
- a) Who should we contact?
 - b) Do you know what authority or responsibility they have?
 - c) Are there any review processes after construction such as submission of as-built plans, Elevation Certificates, or inspections?
63. Could you describe how the agency most likely to develop in floodplains incorporates floodplain management issues in planning and design?
64. Are other state agencies required to follow any specific internal guidance or checklist before they propose development in floodplains?
65. What role do communities have in making sure state developments in their community are compliant?

Regulatory Requirements

66. Are there any other state-imposed statutory or regulatory restrictions on what other state agencies can do in SFHAs?
67. Do mining and energy developments comply with state and national floodplain management regulations? What is the mechanism for them to do so?
68. Is there a state agency that regulates and oversees dune modifications by local communities?
69. Are there any regulations or processes that apply to state programs that provide financial support for development that might affect floodplains? (For example, loans for water waste treatment plant construction and loans for housing.)
- a) What role does your agency have in these processes?
70. What agency maintains insurance coverage on state buildings?
- a) Does the insurance provide incentives for state buildings to account properly for flood hazards?
 - b) Are state properties self insured by the state?
 - c) Does the state follow the precise definition of "self insured" prescribed in the NFIP or some other definition?

Appendix 3, Continued

Specific State Agency Developments

71. Has the state developed a list of state facilities determined to be at risk to the vulnerability of floods or other disasters as part of the hazard mitigation plan?
72. Do you know whether any state agencies have developed or planned projects within SFHAs? Have they done so within the 500-year floodplain?
 - a) Could you tell us more them in terms of their size, year developed, or potential consequences?
73. Do you know of any planned state developments that were altered or abandoned due to concerns about floodplain management?
 - a) Why were they changed?
74. Has a state agency been criticized or sued recently over floodplain management issues?
75. Do you know if state construction projects have caused flood damage to adjacent properties recently?
76. What would you recommend to improve compliance by the other state agencies regarding their development?

II. Wrap-Up

77. Broadly speaking, has the NFIP promoted wise floodplain management in your state? If so, what particular aspects of the program have been effective?
78. Do you think the current way hazards in floodplains are dealt with in your state is the appropriate approach?
 - a. If not, how would you reorganize it? If so, why?
79. Are there any other individuals or offices we have not already discussed that would be particularly useful to speak with for our study?
80. Do you have any further questions about the evaluation or this study?

Thank you once again for your time and assistance, without which this study would not be possible.

Appendix 3, Continued

Appendix A Summary of Responsibilities set forth by 44 CFR 60.25

- Assisting communities in qualifying for participation in the NFIP, developing regulations, and disseminating information on minimum elevation requirements;
- Establishing minimum state floodplain management regulatory standards and coordinating floodplain management activities with other agencies within the state; Assisting in the identification and implementation of flood hazard mitigation recommendations and with floodplain mapping efforts;
- Recommending to Federal officials local priorities and major failures of communities to meet program standards.

Appendix B Wrap-Up for First Interview

- Are there any other individuals or offices we have not already discussed that would be particularly useful to speak with for our study?
- Are there any individuals from the state who have retired or who now work for other agencies with a good perspective on these issues or with long institutional memories who we should consider contacting? Is there anyone in the FEMA Regional office or who retired from that office who we should consider contacting?
- Of the individuals and offices we have identified today, who do you believe would be the most valuable for the study to contact?
- Are there any reports we should get copies of that deal with these issues? Do you know of any reports that compare state programs or floodplain management?
- Do you have any further questions about the evaluation or this study?

Thank you once again for your time and assistance without which this study would not be possible. We will be in further contact regarding our follow-up questions.

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7. ACRONYMS

American Institutes for Research	AIR
Advisory Committee on City Planning and Zoning	ACCPZ
Arizona Department of Transportation	ADOT
Arizona Department of Water Resources	ADWR
Arizona Floodplain Management Association	AFMA
Association of State Floodplain Managers	ASFPM
California Department of Water Resources	DWR
Certified Floodplain Manager	CFM
Code of Federal Regulations	CFR
Community Assistance Program	CAP
Community Assistance Program – State Support Services Element	CAP-SSSE
Community Assistance Visit	CAV
Community Development Block Grant	CDBG
Community Development Block Grant	CDBG
Community Rating System	CRS
Cooperating Compliance Partner	CCP
Cooperating Technical Partner	CTP
Department of Commerce Economic Development Administration	EDA
Department of Natural Resources - Missouri	DNR
Department of Natural Resources - Wisconsin	DNR
Department of Transportation - Texas	TxDOT
Department of Transportation and Development - Louisiana	DOTD
Department of Urban and Community Affairs - Louisiana	DUCA
Ecosystem Enhancement Program - North Carolina	EEP
Executive Order	EO
Farm Service Agency	FSA
Federal Emergency Management Agency	FEMA
Federal Insurance Administration	FIA
Flood Control Assistance Account Program - Washington	FCAAP
Flood Mitigation Assistance	FMA
Floodplain Management Association	FMA
Florida Department of Community Affairs	DCA
Florida Department of Environmental Protection	FDEP

Hazard Mitigation Grant Program	HMGP
Housing and Urban Development	HUD
Lower Colorado River Authority	LCRA
Maine Department of Environmental Protection	MDEP
Maine Emergency Management Agency	MEMA
Maine Floodplain Management Program	MFMP
Maine Natural Resources Protection Act	NRPA
Memorandum of Understanding	MOU
Missouri Department of Transportation	MoDOT
National Flood Insurance Program	NFIP
National Park Service	NRS
Natural Resources Conservation Service	NRCS
New England Association of Floodplain Managers and Storm-water Managers	NEFSMA
North Carolina Department of Environment and Natural Resources	NCDENR
North Carolina Department of Transportation	NCDOT
North Central Texas Council of Governments	NCTCOG
Northwest Regional Floodplain Managers Association	NORFMA
Office of Emergency Services - California	OES
Office of Homeland Security and Emergency Preparedness - Louisiana	OHSEP
Regional Planning Commission - Missouri	RPC
Special Flood Hazard Area	SFHA
Standard City Planning Enabling Act	SCPEA
Standard State Zoning Enabling Act	SSZA
State Assistance Program	SAP
State Emergency Management Agency - Missouri	SEMA
State Planning Office - Maine	SPO
State Roles and Responsibilities Recommendation	SR#
Texas Commission on Environmental Quality	TCEQ
U. S. Corps of Engineers	USACE
U. S. Department of Agriculture	USDA
U. S. Fish and Wildlife Service	FWS
U. S. Forest Service	FSA
U.S. Department of Interior	DOI
U.S. Environmental Protection Agency	EPA

U.S. Small Business Administration	SBA
Washington Conservation Corps	WCC
Water Resources Council	WRC
Wisconsin Department of Transportation	WisDOT

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