

Section 6 – Mitigation Strategy

This section of the Plan addresses requirements of Interim Final Rule (IFR) Section 201.4 (c) (3). A copy of the IFR is provided for reference in **Appendix B** of this document.

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Section	What has been updated?
6.1	<ul style="list-style-type: none"> ● IFR language pertaining to plan updates was added.
6.2	<ul style="list-style-type: none"> ● Reaffirmed the State of Alabama’s hazard mitigation strategy during 2007 plan update.
6.3	<ul style="list-style-type: none"> ● Verified and refined the six mitigation goals. ● Updated the planning process to reflect the efforts undertaken in 2007.
6.4	<ul style="list-style-type: none"> ● This section was re-evaluated and new information was added based on the events of the last three years
6.5	<ul style="list-style-type: none"> ● This section was re-evaluated and new information was added based on the events of the last three years
6.6	<ul style="list-style-type: none"> ● This section was re-evaluated and new information was added based on the events of the last three years
6.7	<ul style="list-style-type: none"> ● This section was revised to incorporate the results of an ongoing analysis of all local capabilities
6.8	<ul style="list-style-type: none"> ● Mitigation Objectives and Actions were reviewed and completed, deleted, and deferred actions documented. ● Objectives and actions were refined based on additional input from the 2007 process. ● New objectives and actions were added as a result of the 2007 plan update. ● Prioritization of the actions was re-evaluated. ● Provided a Mitigation Action Plan based on the revised objectives and actions.
6.9	<ul style="list-style-type: none"> ● The funding sources identified in the 2004 plan were re-evaluated ● Recently identified funding sources were added

6.1 Interim Final Rule Requirements for Mitigation Strategy

The Interim Final Rule (IFR) Subsection 201.4 (c) (3) requires the State Hazard Mitigation Plan to include a Mitigation Strategy.

“(The Mitigation Strategy shall provide) the State’s blueprint for reducing the losses identified in the risk assessment. This section shall include:

- (i) A description of State goals to guide the selection of activities to mitigate and reduce potential losses.
- (ii) A discussion of the State’s pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area including: an evaluation of State laws, regulations, policies and programs related to hazard mitigation as well as to development in hazard-prone areas; a discussion of State funding capabilities for hazard mitigation projects; and a general description and analysis of the effectiveness of local mitigation policies, programs and capabilities.
- (ii) An identification, evaluation and prioritization of cost-effective, environmentally sound and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.
- (iv) Identification of current and potential sources of Federal, State, local or private funding to implement mitigation activities.

Additionally, the Interim Final Rule (IFR) Subsection 201.4 (d) requires that the plan be updated on a regular basis. Specifically, “(The) plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts and changes in priorities.”

6.2 State Mitigation Strategy

During the update planning process in the spring of 2007, the State Hazard Mitigation Council (also referred to as the State Hazard Mitigation Team, or SHMT) reaffirmed Alabama’s overall hazard mitigation strategy:

Reduce risks through actions and policies that limit the effects of natural hazards on the physical assets and citizens of Alabama.

Subsequent subsections of **Section 6** provide detailed descriptions of the State’s hazard mitigation goals, objectives, and implementation strategies.

6.3 State Hazard Mitigation Goals

The 2004 plan identified six goals supporting the State of Alabama’s overall mitigation strategy. During the spring of 2007, the SHMT met and reviewed the goals to assess if they were still valid. Additionally, questionnaires were sent to the SHMT to obtain detailed feedback on the pertinence and validity of the six original goals. At the time of this update, all feedback received

reaffirmed the applicability of the goals from the 2004 plan to the State's updated mitigation strategy.

It should be noted that comments were received stating that the plan should focus additional attention on man-made and technological hazards. However, because the IFR pertains only to natural hazards at this time, it was decided that the hazard mitigation plan's primary focus would remain natural hazards. Discussions pertaining to man-made and technological hazards would be tabled until future plan revisions when further information is available to the team.

The update process has afforded the State the opportunity to refine the wording of the goals to better communicate their intent. These refined goals are:

1. Establish a comprehensive statewide hazard mitigation system.
2. Reduce the State of Alabama's risk from natural hazards.
3. Reduce vulnerability of new and future development.
4. Reduce the State of Alabama's vulnerability to natural hazards.
5. Foster public support and acceptance of hazard mitigation.
6. Establish interagency hazard mitigation cooperation.

These goals are accompanied by objectives and actions that are designed to support the implementation of the goals. A multi-stage process was used to identify, evaluate and prioritize the goals, objectives and actions. The process is described in **Section 6.8**.

6.4 Discussion and Evaluation of State Pre- and Post-Disaster Hazard Management Policies, Programs and Capabilities

In November of 2002, the Alabama Emergency Management Agency (AEMA) initiated the Emergency Management Accreditation Program (EMAP) assessment process of its policies, programs, and capabilities. EMAP provides AEMA with a baseline for continuing assessments that will be considered in future Plan reviews and updates. AEMA is an active participant in EMAP, and AEMA Director serves on the EMAP Commission.

NOTE: At this time, the State is trying to obtain the latest EMAP assessment for incorporation into this section.

At the time the initial version of this plan was being developed, AEMA had started a comprehensive examination of legislative efforts involving AEMA. Prior to Hurricane Ivan, the AEMA's Director formed the AEMA Legislation Committee. The purpose for this committee was to review current Alabama Emergency Management statutes (31-9-01 et seq, Code of Alabama, 1975, as amended) and compare them to emergency management statutes of other states to determine if new legislation (or amendments to existing legislation) were needed to better support the mission and goals of AEMA in its service to the citizens of Alabama.

As a result of the State's continuing legislative review process, Act 522 was signed into law by Governor Bob Riley on April 20, 2006. The Act amended the Alabama Emergency Management Act of 1955 (Sections 31-9 et seq, Code of Alabama), which first established the Alabama Emergency Management Agency and defined the roles, powers, and duties for emergency management within the State. Sections 31-9-3, 4, 8, and 10, related to State

emergencies and AEMA were strengthened to provide for emergency proclamations, expand the authority of State and local responders, establish degrees of emergency classifications, and provide for the powers of political subdivisions for emergency management.

The legislative committee noted above, comprised of the Assistant Director (Chair), the Executive Officer, the General Counsel, the Public Assistance Officer, the Director of Operation, the Director of Preparedness, and the Training Coordinator AEMA management staff continues to meet on a quarterly basis to evaluate and strengthen State legislation affecting emergency management.

6.4.1 Discussion and Evaluation of State Pre- and Post-Disaster Hazard Management Policies

Pre-Disaster Hazard Management Policies

Alabama has instituted Hazard Management Policies through various State agencies and authorities. Each agency is responsible for drawing up guidelines to mitigate and manage hazards associated with operations normally handled through the agency's daily functions and operations. Agencies with pre-disaster hazard management/mitigation policies include the AEMA, Alabama Department of Conservation and Natural Resources (ADCNR), Alabama Department of Environmental Management (ADEM), and the Department of Economic and Community Affairs (ADECA). The relevant policies of each Agency are discussed below.

The Alabama Department of Conservation and Natural Resources-State Lands Division-Coastal Section (SLD-Coastal Section), is the lead agency for the Alabama Coastal Area Management Program (ACAMP). As such, the SLD-Coastal Section is responsible for developing policies and programs, fiscal management, conducting education and outreach, managing State submerged lands and the overall administration of the ACAMP. The policies of the ACAMP recommend pre-disaster mitigation planning, and are intended to discourage development in higher risk coastal zones, which are more vulnerable to natural threats such as flooding and hurricanes.

ADEM, through its Administrative Code, Division 8 Coastal Program Regulations, permits, regulates and monitors uses and activities having a direct or significant impact on coastal Alabama and its resources. These regulations specifically regulate development in higher risk coastal zones, which are more vulnerable to natural threats such as flooding and hurricanes. Activities regulated under these regulations include construction and other activities on Gulf of Mexico beaches and dunes in the Alabama Coastal Zone. The Division 8 regulations address construction along beaches and dunes and any developments greater than five acres to provide protection for the primary dunes, beach sands, and covering vegetation by regulating construction or alteration of the beach from the mean high tide line to the Construction Control Line (CCL). The CCL is a defined, surveyed line essentially paralleling, and setback from, the Gulf shoreline. Structures located seaward of this line are not permitted by the program. The CCL was designed to provide long-term protection of the beaches and dunes by prohibiting construction seaward of this established setback line. The CCL helps protect property values and minimize damage from storm surge and other natural hazards. Developers are not allowed to remove primary dune or beach sands and/or vegetation between the CCL and the mean high tide.

The regulations relevant to the CCL require an environmental impact and natural hazards study for any condominium, motel, hotel or similar development located on a property intersected by the CCL. This requirement includes a wave height study addressing the flood and erosion potential at the project site using eroded beach profiles for pre- and post-development. Additional components of the Division 8 regulations include:

- A beach and dune enhancement plan which calls for dune fencing, dune walkovers and planting of vegetation to control shoreline erosion and minimize impacts to beaches and dunes;
- Control of the use of bulkheads, retaining walls and similar structures which could impact beaches, dunes and structures during storm surge; and
- Permitting and certification requirements for dredging and fill in the coastal area.

For the most part, coastal communities follow ADEM guidelines and restrictions for coastal construction, and most coastal communities have adopted the International Building Code Series to replace the previous Standard Building Codes of the Southern Building Code Congress. Enforcement of local building codes is included in all local mitigation plans, and in addition, all coastal municipalities have zoning and subdivision regulations in effect. Mobile and Baldwin, the coastal counties, both have flood hazard ordinances in effect for unincorporated areas, but, of these two, only Baldwin County is authorized by State law to administer comprehensive zoning regulations within its unincorporated jurisdiction.

The Community Rating System (CRS) Program implemented by the Federal Emergency Management Agency (FEMA) through the National Flood Insurance Program (NFIP) allows policy holders within participating communities to receive a discount on NFIP policies. Any NFIP community may apply for inclusion in the CRS Program and be credited for a range of flood hazard mitigation activities that exceed NFIP minimum standards.

Through the Insurance Services Office (ISO), a community applicant is graded based on criteria set forth in CRS guidelines for flood hazard mitigation. The grade assigned to each community results in a CRS classification. The CRS class determines the applicable insurance discount for the policy holders within the community.

The CRS class rating is a scale of one through ten, with Class 1 communities receiving a 45 percent discount and Class 10 communities receiving no discount. **Table 6.4-1** summarizes each CRS class and the applicable discount.

**Table 6.4-1
CRS Class and Discount**

CRS Class	Discount (percent)	CRS Class	Discount (percent)
1	45	6	20
2	40	7	15
3	35	8	10
4	30	9	5
5	25	10	0

According to data compiled by FEMA through October 1, 2006, Alabama has 12 communities participating and three communities whose eligibility was rescinded for non-compliance with continuing program eligibility requirements. All remaining NFIP communities are deemed Class 10. **Table 6.4-2** lists the participating communities in Alabama and the current CRS class and status of each community.

**Table 6.4-2
Alabama Participating CRS Communities and CRS Class**

FEMA Community Number	Community Name	CRS Entry Date	Current Effective Date	Current CRS Class	Status
010146	Athens, City of	10/1/91	10/1/98	10	Rescinded
010071	Atmore, City of	05/1/02	05/1/02	8	Current
015000	Baldwin County	10/1/95	05/1/06	8	Current
010116	Birmingham, City of	10/1/94	10/1/05	6	Current
010418	Dauphin Island, Town of	04/1/01	04/1/01	8	Current
010176	Decatur, City of	10/1/91	10/1/05	10	Rescinded
015005	Gulf Shores, Town of	10/1/93	10/1/93	9	Current
015006	Homewood, City of	10/1/01	10/1/01	9	Current
010123	Hoover, City of	10/1/91	10/1/91	9	Current
010153	Huntsville, City of	10/1/91	05/1/03	7	Current
015007	Mobile, City of	10/1/92	10/1/93	10	Rescinded
015011	Orange Beach, City of	10/1/91	10/1/93	8	Current
010189	Pell City, City of	10/1/92	10/1/92	9	Current
010002	Prattville, City of	10/1/91	10/1/91	9	Current
010070	Wetumpka, City of	10/1/91	10/1/91	9	Current

According to FEMA, each community must submit a recertification document by October 1 each year to maintain eligibility for the program. The recertification requirement includes documentation that mitigation program activities initially credited to the community have continued, in addition to documenting any new strategies implemented since the previous October 1. Any community that has received a Class 9 or better classification will revert to Class 10 on the following May 1 unless it submits the signed recertification worksheet by October 1 of each year. If the recertification does not include all the needed documentation, the community may lose enough points to cause a retrograde in its CRS classification. A repetitive loss community that fails to submit a copy of its annual outreach project or a community that fails to submit its annual progress report will revert to a Class 10.

The EMAP evaluation noted that “the state emergency management law as a whole provides adequate non-emergency, preparatory, and disaster response flexibility by its broad nature to allow AEMA to conduct its activities and accomplish its mission.” It goes on to note that “although AEMA has enabling legislation it does not have the full extent of legal provisions as stated in the EMAP standard.”

Note: This discussion will be revised once the most recent EMAP evaluation findings are reviewed.

Post-Disaster Hazard Management Policies

On April 20, 2006, Governor Bob Riley issued the 2006 State of Alabama Emergency Operations Plan (EOP) to replace the previous plan approved in 2000. According to the 2006 EOP:

“The EOP, using the National Response Plan (NRP) and the National Incident Management System (NIMS), establishes the mechanisms to:

- Maximize the integration of incident-related prevention, preparedness, response, and recovery activities;
- Improve coordination and integration of State, County, local, Tribal, private-sector, and nongovernmental organization partners;
- Maximize efficient utilization of resources needed for effective incident management;
- Improve communications and increase situational awareness;
- Facilitate mutual aid and State support to County, local, and Tribal governments;
- Facilitate State-to-State support;
- Provide proactive and integrated State response to catastrophic events; and
- Determine priorities and coordinate protection, response, and recovery of critical infrastructure.

This EOP is based upon guidelines contained in the National Response Plan (NRP). The NRP, as a core plan for national incident management, is linked to an array of incident or hazard-specific Federal contingency plans that are designed to implement the specific statutory authorities and responsibilities of various departments and agencies. Therefore, State agencies that partner with Federal agencies should be operating under the same guidelines to ensure complete and comprehensive coordination.

Emergency Support Functions (ESFs) to the EOP are functional and expand upon the concept of operations contained in the Basic plan. Annexes provide specific responses for agencies of government and define their responsibilities.

The Standard Operating Guidelines (SOGs) required for the implementation of the State EOP are not included because of their voluminous nature. SOGs are the general operating guidelines for departments and agencies and are maintained by those departments and agencies.

An annual review of the EOP will be undertaken by the AEMA Director and those agencies and departments of State government having emergency assignments. The Director will insure that a list of all plan holders is maintained at the AEMA Office and that updates are sent to each one of these individuals.

This plan requires fair and equal treatment to all regardless of race, creed, color, national origin, sex, age, or handicap. First priority will always be to save lives, second is protection of the environment, and third is mitigation of damage to property.”

6.4.2 Discussion and Evaluation of State Pre- and Post-Disaster Hazard Management Programs**Pre-Disaster Hazard Management Programs**

Pre-disaster management programs in Alabama are established primarily at the local, rather than State level. The State of Alabama manages two programs aimed at pre-disaster mitigation planning, the Alabama Shoreline Erosion and Hazard Mitigation Plan, and the Alabama Coastal Area Management Plan. These programs are discussed below.

Alabama Coastal Area Management Plan (ACAMP) – ADCNR, State Lands Coastal Section is the lead agency for the ACAMP and is responsible for developing policies and programs, fiscal management, conducting education and outreach, managing State submerged lands and the overall administration of the ACAMP. The permitting, monitoring and enforcement portion of the ACAMP is implemented by ADEM. ACAMP represents Alabama's participation in the federally funded Coastal Zone Management (CZM) Program. The CZM Program is administered by the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce.

The ACAMP outlines the policies of the program while the ADEM Division 8 regulations provide the regulatory framework and standards for conducting certain activities in the coastal area. The major functions of the program are to protect coastal resources and to provide adequate public access for recreation and commerce. Resource protection includes addressing such issues as shoreline erosion, water and air quality, wildlife habitat protection, wetland protection, dune protection, urban development, and hazard management. This program also helps protect coastal resources by providing technical assistance on zoning regulations and hazard mitigation to local governments.

In addition to the programs noted above, Alabama actively pursues natural hazard mitigation opportunities, primarily through FEMA grant programs (**Appendix I**) and technical assistance. The State, primarily through AEMA, encourages communities and potential sub-grantees to participate in the FEMA programs, and offers technical assistance and support in developing project applications.

Post-Disaster Hazard Management Programs

Post-disaster management programs in Alabama are established primarily at the State level. The State of Alabama manages the Alabama Emergency Operations Plan program aimed at post-disaster response and mitigation.

Alabama Emergency Operations Plan (EOP) – The EOP is designed for State level response to local emergencies. The State plan recognizes the role of the Federal government in major natural disasters, and contains procedures to request and utilize Federal help. The plan ties the Federal, State and local roles in regard to preparedness, response and recovery. The plan also delineates the chain of command for each section of disaster management. Some mitigation initiatives also appear in the plan.

The EMAP evaluation indicates that the State has “(a)n emergency operations/response plan for carrying out specific actions at project times and places in an emergency or disasters”, and that the (state) has identified and assigned areas of responsibility to organizations and individuals” for doing so. It also notes that “plans and procedures are in place for maintaining continuous critical government services and/or programmatic operations under disaster conditions.” However, the assessment also indicates that the State is non-compliant with respect to EMAP Standard 3-9-6, noting that State ESF 5 “does not establish plans/procedures for maintaining critical government services or programmatic operations of the State under disaster conditions. Some but not all of the ESFs within the EOP contain a continuity of government section.” **Note: This discussion will be revised once the most recent EMAP evaluation findings are reviewed.**

6.4.3 Discussion and Evaluation of State Pre- and Post-Disaster Hazard Management Capabilities

Pre-Disaster Hazard Management Capabilities

The State of Alabama has, through a variety of programs and funding sources, established a record of accomplishment on behalf of the citizens of the State. The capability of the State to manage hazards is demonstrated by its success in formulating projects and securing local matching funding for pre- and post- disaster mitigation projects. Financing of hazard mitigation has been accomplished through several primary, mostly FEMA-based funding mechanisms over many years.

The State relies exclusively on a local matching approach to secure appropriate levels of funding. Pre- and post disaster mitigation activities are promoted and facilitated by the State. The State functions largely in an administrative and coordinating role only through its EMA. The State's EOP coordinates the response effort.

Most of the State's EMA capability has evolved in the development and stewardship of hazard management and mitigation projects initiated in conjunction with several key programs. The Hazard Mitigation Grant Program (HMGP) continues to be the focal point of most AEMA capability. To a lesser extent, State capability is based on its ability to administer programs and projects through Unmet Needs funding requests, Flood Mitigation Assistance (FMA), and more recently, through the Pre-Disaster Mitigation funding programs.

The 2004 EMAP evaluation noted that the State's emergency management program strategy "is not based on the results of an all-hazards identification, risk assessment and impact analysis" (as required by the EMAP standard). Hazard mitigation documents provided by the State did not address manmade and technological hazards. Additionally, the assessment found that the emergency management program's mitigation strategy was non-compliant in several subject areas. These included (item numbers are from the EMAP report): (d) removal or elimination of the hazard; (e) reduction or limitation of the amount or size of the hazard; (j) establishment of hazard warning and communication procedures, and; (k) redundancy or duplication of critical systems, equipment, information, operations or materials. **Note: This discussion will be revised once the most recent EMAP evaluation findings are reviewed.**

The State was found to be in compliance with all the other qualifying "sub-elements", including (a) use of appropriate building construction standards; (b) hazard avoidance through appropriate land use practices; (c) relocation, retrofitting, or removal of structures at risk; (f) segregation of the hazard from that which is to be protected; (g) modification of the basic characteristics of the hazard; (h) control of the rate of release of the hazard (met for natural hazards), and; (i) provision of protective systems or equipment. **Note: This discussion will be revised once the most recent EMAP evaluation findings are reviewed.**

Post-Disaster Hazard Management Capabilities

The 2004 EMAP assessment indicated that no written policy for implementing mitigation activities exists. It further noted that "although some ESFs in the EOP have a Recovery Actions section, these few do not adequately establish or maintain the continuity of response activities that must continue into recovery and mitigation throughout the state. Each ESF must have a plan, or section in the EOP, to move from response, to recovery, and to identify mitigation

opportunities.” The evaluation also mentioned that a “review of ESF 5 indicated that it does not establish plans/procedures for maintaining critical government services or programmatic operations of the state under disaster conditions.” The EOP, basic plan Section VI, includes continuity of operations. **Note: This discussion will be revised by once the most recent EMAP evaluation findings are reviewed.**

6.5 Evaluation of State Laws, Regulations, Policies and Programs Related to Hazard Mitigation and Development in Hazard Prone Areas

6.5.1 Evaluation of State Laws Related to Hazard Mitigation and Development in Hazard Prone Areas

The following is a review of the State laws of pre-disaster and post-disaster hazard management. AEMA was established through Section 4 of the Alabama Emergency Management Act of 1955 (Public Law 31-9), Act 47, June 1955.

Section 10, Alabama Law, 1955 Act No. 47, authorizes and directs local governments to establish organizations for emergency management. Under this legislation, each county is required to have an emergency management organization, either individually or jointly. Appropriate ordinances and/or resolutions are required to establish each local organization and must provide for the organization, powers, duties, divisions, services and staff of the agency. The EMA office must maintain and display current functional statements and organizational charts. Initial submittals of annual budgets must be accompanied by a functional statement and an organizational chart. Subsequent submissions of the organizational chart and functional statement are required only when a change/revision is published. FEMA Form 85-17, Staffing Pattern for each participating political jurisdiction, is a required part of the State's annual Comprehensive Cooperative Agreement. Thus, the current annual State submission reflects local agencies meeting eligibility criteria to receive EMA funds.

One of the most significant State enabling statutes related to hazard mitigation can be found in Title 11, Chapter 52, *Planning, Zoning, and Subdivisions* of the Code of Alabama. Section 11-52 et seq is the State planning enabling legislation for municipalities only. First enacted in 1935, the statute provides municipalities' broad powers for comprehensive planning, capital improvements programming and the regulation of land use, development, and conservation of land areas through zoning ordinances and subdivision regulations. It permits municipalities to create planning commissions to oversee planning and land use controls, and Boards of Adjustments to hear appeals. It is the basis for floodplain management regulations within all municipalities and provides additional powers to control the location and types of development activities that might be affected by other natural hazards, including landslides and land subsidence.

Unincorporated areas of counties in Alabama are severely restricted by the lack of a State planning enabling statute. Only three counties statewide – Baldwin, Jefferson, and parts of Shelby County – are permitted to establish zoning ordinances by special acts adopted by the State. County regulation of subdivisions within unincorporated areas, however, is granted by Title 11, Chapter 24 of the Code of Alabama. County commissions are permitted to regulate the subdivision of land and the construction of streets and utilities with the advice of an advisory

board. Municipalities may enforce subdivision regulations within its police jurisdictions, which extend two miles beyond the municipal boundaries within unincorporated areas of a county.

Code of Alabama, Title 11, Chapter 19, Sections 11-19-1 through 11-19-24, entitled *The Comprehensive Land Use Management Act* was enacted to prevent economic and human loss in flood-prone areas and permit counties to manage floodplain development within unincorporated areas. This act provides the established county commission the authority to create a comprehensive land-use management program for floodplain management, in accordance with the NFIP criteria. As a result, unincorporated communities are eligible for flood insurance through the NFIP. The program helps mitigate damages caused by floods by controlling land use and development and improving the long-range management of flood prone areas. The statute authorizes each county commission to adopt floodplain management ordinances for unincorporated areas. County Planning Commissions are granted broad authority to control development in flood-prone zones by adopting ordinances and Flood Insurance Rate Maps that delineate the various flood zones controlled by the adopted ordinances. Each county must appoint an administrator of the program and provide for a Board of Adjustment to hear appeals to the ordinance requirements.

Title 41, Article 6, Code of Alabama, establishes a State Building Commission and adopts the Standard Building Code of the Southern Building Code Congress. The Standard Building Code has since been superseded by the International Code Series of the International Code Council. The Building Commission oversees the planning, acquisition, and construction of all State buildings. Section 41-9-166 of Article 6 authorizes municipalities and counties to adopt and enforce building and technical codes.

Title 24, Chapters 4, 4A, and 5, Code of Alabama, establishes the Alabama Manufactured Housing Commission to regulate manufactured and modular homes and buildings, including anchoring requirements. Manufactured Homes must meet Federal specifications of the U.S. Department of Housing and Urban Development.

Executive Order No. 14 June 14, 1971 provides for "Assignment of Emergency Preparedness Functions to State Departments and Agencies," as of June 14, 1971, and was adopted by reference by AEMA.

Executive Order No. 27 March 3, 1966 provides for the "Creation of the State Office of Emergency Planning," as of March 3, 1966, and was adopted by reference by the Alabama Emergency Management Agency. Executive Orders 27 and 14 authorize the Governor to use the services, equipment, supplies and facilities of existing State departments, offices and agencies for emergency management purposes. In the event of an impending or actual attack or manmade, technological or natural disaster, Section 4 of Executive Order 14 authorizes the transfer of direction, personnel or functions of state agencies, boards, and commissions for the purpose of performing or facilitating disaster or emergency services.

Executive Order No. 40, July 23, 1985 states that AEMA shall act as the coordinating agency for the state in the event of an incident/accident involving a leak, spill, release of hazardous material, or threat of same. AEMA shall develop, in cooperation with other departments and agencies of State government, the necessary plans, rules and procedures for responding to these incidents/accidents. AEMA will be responsible for ensuring that these plans, rules and procedures are implemented and carried out in the State of Alabama. This executive order further requests that departments and agencies of state government who have response capability cooperate with the AEMA, the Department of Public Safety and the Department of

Environmental Management in the establishment of a coordinated and unified system that will assure the citizens of Alabama have the best protection available from hazardous materials, spills, leaks, and releases. This executive order was adopted by AEMA.

Executive Order 19, February 24, 2004 established Alabama's State Hazard Mitigation Team directing all State agencies to participate in development of the State Hazard Mitigation Plan. The SHMT is directed to develop the Plan, and to assist in prioritizing and selecting of hazard and pre-disaster mitigation grant program project applications. The SHMT is intended to function for the duration of Plan development, and remain in place until the three year plan to update the hazard mitigation plan has been approved by FEMA. The SHMT is active in development of local plans statewide, with a focus on information sharing, issues resolution, and commonality of approach and objectives.

6.5.2 Evaluation of State Regulations Related to Hazard Mitigation and Development in Hazard Prone Areas

Much of the authority to perform pre-disaster planning and mitigation through development regulations is allocated to the local level counties and municipalities. A key state regulation addressing pre-disaster mitigation planning at the state level is the ACAMP, overseen by ADCNR and implemented by ADEM. As defined by the program, the ACAMP consists of comprehensive management policies and guidance for the protection and enhancement of the quality, quantity, and viability of coastal resources and the management of the uses of these resources. While the plan is fairly comprehensive, the enforcement component should be further considered relevant to development regulations such as land-use plans and no-build zones.

Alabama has granted localities very limited authority to regulate development through its planning enabling legislation. Based on the New York City Zoning Ordinance of 1925, Alabama's 1935 enabling legislation has remained virtually unchanged to this day. It restricts enabling authority to cities and towns only, requiring counties to seek special acts to extend zoning controls to unincorporated communities. "Smart Growth" efforts have recently begun to examine and modernize the State legislation to better promote improved land development practices.

Alabama enacted the Comprehensive Land Use Management Act to give individual counties the right to establish commissions to control development in flood-prone and hazard areas through land use planning and zoning. Each commission has the right to establish and enforce zoning and construction limits in flood-prone areas. While this method is a reasonable approach for permitting floodplain management within unincorporated areas, a state-wide program to enable localities to plan for and manage the full range of land use and development in all areas, both incorporated and unincorporated areas, should be considered.

6.5.3 Evaluation of State Policies Related to Hazard Mitigation and Development in Hazard Prone Areas

To prevent the introduction of new risks from hazards throughout the State, current State hazard mitigation policies mandate an appropriate level of state and local organization and coordination for an effective and programmatic approach to identifying projects to reduce and manage hazards.

While appropriate policies appear to be in place, funding mechanisms are substantially reliant on Federal funding with local match requirements. To achieve the desired result of what appears to be fundamentally sound policies some additional dedicated State funding source may be beneficial from a management, enforcement, and implementation standpoint. Current policies describe comprehensive organizational responsibilities and interactive capabilities between state and local authorities, coordinating agencies and local populations. Disaster response policies, it may be noted, are particularly established.

6.5.4 Evaluation of State Programs Related to Hazard Mitigation and Development in Hazard Prone Areas

In the past, primary responsibility for coordination and facilitation of hazard mitigation activities was assigned to AEMA, with the primary focus on responding to local requests from private citizens, citizen groups, planning agencies, and municipal and county governments for assistance with grant applications and coordination with FEMA for judgment on applicability and justification. Transition from a reactive to a more pre-emptive hazard mitigation protocol currently is underway, as local plans are developed and updated and more specific and detailed risk assessment models are developed in accordance with ongoing State Plan initiatives.

While FEMA Pre-Disaster Mitigation (PDM) grants are available and were used for the initial development of a number of local migration plans, state reliance is heaviest on the HMGP, with some focus on Public Assistance and other facilitating programs. In most cases, specific hazard mitigation funding is requested through a local agency that seeks funding for a specific, and generally, post-disaster defined mitigation project through submittal to AEMA.

The most active areas of grant use are relocations and elevations of at-risk and repetitive loss sites. A number of successful neighborhood relocations may be claimed, though a number of other candidates for mitigation still exist. In addition, the State often utilizes mitigation grants to improve its sheltering capacity.

With respect to flooding, historically, there have been several cooperative ventures initiated by local interests over the past two decades involving the US Army Corps of Engineers. With the specific intention of mitigating hazards in several notable flood-prone areas within metropolitan areas, a number of waterway improvement studies, notably in Shelby, Jefferson, Mobile, and Baldwin Counties (which together comprise the majority of flood damage claims in the State) have been prepared. Several studies have performed comprehensive cost/benefit analyses to mitigate prospective flood zones, and some limited structural improvements are on record, but many of the studies have typically culminated prior to execution of specific mitigation, due to local funding constraints.

One existing program that should have a positive impact on reducing risks from hazards is related to the historically more vulnerable coastal areas of the State. Administered by the State's Department of Conservation and Natural Resources and enforced by the Department of Environmental Management, the ADEM Division 8 Coastal Program Regulations contain explicit guidance on regulation of development in the Coastal Zone, mandating specific requirements and restrictions relevant to building in flood prone or storm surge vulnerable areas. Development throughout Alabama's coastline in Mobile and Baldwin Counties continues to accelerate, illustrating the conflicting objectives of community development and natural resource protection under hazard mitigation guidelines.

Other programs:

- Alabama Emergency Operations Plan; and
- State of Alabama Hazard Mitigation Administrative Plan.

While policies are in place to facilitate pre-disaster Hazard Mitigation, the predominating programs continue to evolve from reactive in practice to proactive in stance. In addition, this Plan will evolve the State's method of administering its hazard mitigation program from one of coordinating requests to FEMA into a program that prioritizes and challenges the effectiveness and worthiness of grant applications against the objectives of the Disaster Mitigation Act of 2000 (DMA2K).

6.6 State Funding Capabilities for Hazard Mitigation Projects

This section describes the State of Alabama's designated authority and enabling mechanisms for funding of hazard mitigation projects. In Alabama, the Governor has designated the Director of the AEMA as the officer of the State authorized to accept Federal funding for emergency management purposes. Funds received are deposited by the State Treasurer and disbursed by the State Comptroller, subject to requisition by the AEMA Director. Section 18, Alabama Law, 1955, Act No. 47, authorizes the Governor, or the governing body of a political subdivision acting with the consent of the Governor, to accept Federal funds in the form of gifts, loans, or grants. AEMA operates its funding mechanisms in accordance with the following enabling State and Federal legislation, regulations and program criteria.

Funds for the operation of AEMA are authorized in an appropriation made by the legislature based on a budget submitted in accordance with Code of Ala. 1975, §§ 41-4-80 through 41-4-96.

Funding for local emergency management organizations is authorized by Code of Ala. 1975, §§ 31-9-10, 31-9-24. Budgets are submitted as required by the political subdivision, and as specified in paragraph V.C.2c (2) of the *Alabama Emergency Management Agency Administrative Manual*, dated October 1, 1985, and revised December 15, 1988.

Accounts to manage local funding should be established within the local government's existing accounting system.

Under the Emergency Management Performance Grant (EMPG) Program, funds are provided by FEMA as authorized in Public Law 81-920 for the purpose of increasing operational capability at the State and local level. These funds can be expended for necessary and essential personnel and administrative expenses, including but not limited to salaries, benefits, travel, office supplies, equipment and administrative communications. The State and/or local governments must match on a one-for-one basis financial assistance provided for EMGP Program purposes. To be eligible to receive EMGP Program funds to support a local emergency management program, a political subdivision must meet the criteria as referenced in the *Alabama Emergency Management Agency Administrative Manual*, dated October 1, 1985, and revised December 15, 1988.

Local jurisdictions desiring project application funds and maintenance and services funds must follow the criteria as outlined in the *Alabama Emergency Management Agency Administrative Manual*, dated October 1, 1985, and revised December 15, 1988.

State and local agencies will maintain such accounts, records, papers and other pertinent supporting materials, which will permit an accurate determination of the status of Federal and other contributions as outlined in the *Alabama Emergency Management Agency Administrative Manual*, dated October 1, 1985, and revised December 15, 1988.

AEMA negotiates with the Alabama Power Company and the Tennessee Valley Authority for utility funds that are required to support off-site emergency planning at their nuclear power plants. These negotiations are based on Federal mandates for emergency preparedness.

The State of Alabama Hazard Mitigation Administrative Plan documents the State's process for administering HMGP funds. While specifically intended as the primary guidance for State management of HMGP activities only, it represents the current administrative model for the state's acquisition and stewardship of funding mechanisms generally; and, as such, it is the best current framework describing Alabama's financial management capabilities. The plan defines applicant eligibility criteria, the application process, and management procedures for distribution of funding under the program. These plans are used by the State Staff Emergency Coordinators, Emergency Management Coordinators (EMC), the State Hazard Mitigation Team, and the individual county Emergency Coordinators. On January 9, 2004, the *State of Alabama Hazard Mitigation Administrative Plan* was approved by FEMA. The plan provides procedures at the State level for the management of HMGP funds. The plan is designed to interlock the *Public Assistance Plan* and the *Individual and Family Grant Administrative Plan*. These last two mentioned plans are part of the comprehensive approach that AEMA has fostered toward hazard mitigation.

The State's current strategy is to access federal funds for qualifying initiatives and facilitate development of local funding sources through municipal and county entities to fund local match requirements. To date, the State of Alabama has continually met the local match requirements associated with funding of Federal sponsored programs, due in part to the continual financial support of the hazard mitigation programs and initiatives by local city and county governments.

The State mitigation plan is also an umbrella for the local plans required for future mitigation grant programs. Mitigation planning begins at the local level, in communities, towns, and cities where impacts of damaging events are first felt, and the current State plan addresses this. Local mitigation planning focuses community attention on development issues prior to a disaster, ensuring participation in a more proactive sense. Active hazard mitigation in a community also contributes to public safety and welfare, economic development, and environmental protection. Following adoption of the initial State Hazard Mitigation Plan, Alabama began pre- and post-disaster mitigations by accessing (or continuing to access) some of the following vehicles using local matching monies:

Hazard Mitigation Grant Program (HMGP) - Some of the most significant mitigation in Alabama has been accomplished with the HMGP. FEMA uses a sliding scale to determine the amount of HMGP funds that it provides after a disaster. FEMA provides 15 percent of the first \$2 billion spent in overall assistance. FEMA then provides 10 percent of each dollar between \$2 billion and \$10 billion and 7.5 percent for each dollar between \$10 billion and \$35.3 billion. If a state has an approved "enhanced" state hazard mitigation plan, it is eligible to receive up to 20 percent of the overall assistance. Alabama is presently working toward an approved Enhanced

Plan. One of the primary uses of HMGP funds has been for acquisition of vulnerable properties or “buyouts” that move people out of damage-prone areas. HMGP funding, while not sufficient to accomplish all of the desired projects, continues to be the centerpiece of the Alabama Hazard Mitigation Strategy. In the State of Alabama, local governments are currently the prime source of funding for the local match associated with this program. At this time, the SHMT believes that local municipalities will continue at their current level of participation with regard to funding local match requirements.

Flood Mitigation Assistance (FMA) – FMA provides funding to States and communities so that measures are taken to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes and other structures insurable under the NFIP. FEMA distributes FMA funds to States that, in turn, provide funds to communities. The State serves as the grantee and program administrator for the FMA.

Pre-Disaster Mitigation (PDM) – The Pre-Disaster Mitigation (PDM) Program was authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC, as amended by §102 of the Disaster Mitigation Act of 2000. Funding for the program is provided through the National Pre-Disaster Mitigation Fund to assist States and local governments (to include Indian Tribal governments) in implementing cost-effective hazard mitigation activities that complement a comprehensive mitigation program.

Severe Repetitive Loss (SRL) and Repetitive Flood Claims (RFC) – These new programs were established by the Flood Insurance Reform Act of 2004. The intent of these programs is to reduce or eliminate the long-term risk of flood damage to residential properties with repetitive loss claims under the NFIP. The SLR can fund flood-proofing of historical properties and relocation, elevation, acquisition, or reconstruction of eligible residential properties. The RFC is a companion program to the FMA and can provide up to 100 percent funding for acquisition or relocation of residential properties that meet the repetitive loss criteria of the FMA but cannot meet the required 25 percent match.

The Alabama Public Assistance Plan provides procedures to manage Public Assistance funds, while *The Individual and Family Grant Plan* provides criteria and procedures for Individual Assistance, and the State has performed a number of projects utilizing PA funding. The Public Assistance Program provides supplemental Federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations. The Federal share of assistance is at least 75 percent of the eligible cost for emergency measures and permanent restoration. The State determines how the non-Federal share (up to 25 percent) is split with the applicants. Eligible applicants include the States, local governments, Indian tribes and certain PNP organizations. The State is the grant administrator for all funds provided under the Public Assistance Program. Part 13 of the Code of Federal Regulations gives the states more discretion to administer federal programs in accordance with their own procedures and thereby simplify the program and reduce delays. As grantee, the State is responsible for administering the programmatic and grants management requirements of the Public Assistance Program. Key among the programmatic requirements is informing the applicants of the assistance available to them: what is eligible and how to apply for it. Grant management includes applying for federal assistance, monitoring and closing out the grant. The State and FEMA work in partnership to provide prompt and consistent service to all applicants.

Under the new Public Assistance Program, the State will have many of the same roles and responsibilities as under the present system. FEMA recognizes that states have different

capabilities to perform their assigned duties. FEMA intends to work in partnership with those states requiring technical assistance to serve the needs of their applicants.

Once insurance requirements are established, FEMA will reduce otherwise eligible costs by the actual or anticipated insurance recoveries the applicant receives. The State must notify FEMA of any entitlement to insurance settlement or recoveries for a facility and its contents. For insurable buildings located in a special flood hazard area and damaged by flood, the reduction is the maximum amount of insurance proceeds the applicant would have received had the building and its contents been fully covered by a standard flood insurance policy under the National Insurance Program. The applicant is required to buy insurance in the amount of the eligible damages for flood and general hazards.

For small projects, a grant is based on an estimate of the cost of the work. For large projects, a final grant is based on actual eligible costs. In large projects, the State disburses progress payments, as required. The dollar amount of a small or large project changes each fiscal year and is based on the Consumer Price Index.

The Economic Adjustment (Title IX) Program helps State and local areas design and implement strategies for adjustments due to changes in their economic situation that are causing, or are threatening to cause, serious structural damage to the underlying economic base. Such changes may occur suddenly or over time, and result from, for example, industrial or corporate restructuring, new Federal laws or requirements, reductions in defense expenditures, depletion of natural resources and natural disasters.

Community Assistance Program State Support Services Element (CAP-SSSE) - This program provides funding to meet negotiated objectives for reducing flood hazards in NFIP communities. Emphasis is placed on adherence to the NFIP and to floodplain management practices voluntarily adopted by participating NFIP communities. Objectives are to identify, prevent, and resolve floodplain management issues in participating communities before they result in a compliance action by FEMA. Special emphasis to be placed on establishing and training a State Interagency Hazard Mitigation Committee to coordinate the development and implementation of a strategic mitigation plan, and coordinate pre and post disaster mitigation activities/ opportunities.

State and Local Assistance 1 - This program provides for development and maintenance of disaster preparedness and assistance plans, programs, capabilities and organizations by the State and local governments.

State and Local Assistance 2 - This program, formerly Other Assistance (OA) formed from previous 100 percent FEMA programs, provides essential preparedness activities to support both hazard specific and generic multi-hazard activities throughout the State.

The PDM program was authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 U.S.C. 5133, as amended by §102 of the Disaster Mitigation Act of 2000 (DMA2K), to provide technical and financial assistance to states and local governments, including Indian Tribal governments, to assist in the implementation of pre-disaster hazard mitigation measures that are cost-effective and designed to reduce injuries, loss of life, and damage and destruction of property, including damage to critical services and facilities under the jurisdiction of the states or local governments. The DMA2K emphasizes the importance of strong state and local planning and comprehensive program management at the state level.

Alabama has facilitated a number of initiatives consistent with PDM objectives, enabling the State and its served communities to implement more preventive, pre-disaster activities. Funds are applied for and used to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to the population and structures, while also reducing reliance on funding from actual disaster declarations. Alabama recognizes that the PDM program provides a significant opportunity to raise risk awareness and to reduce the State's disaster losses through pre-disaster mitigation planning and the implementation of planned, pre-identified, cost-effective mitigation measures, with a focus on funding mitigation projects that address NFIP repetitive flood loss properties.

FEMA made \$250,000 in planning grants available to the State to facilitate development of the initial State Plan in 2004, and additional funding for the current plan update. The State of Alabama has utilized PDM funds to assist in the development of both local mitigation plans and the State Plan. AEMA has been working with local EMA offices and the Regional Planning Councils through its All-Hazards Task Force to provide both funding and technical support of local mitigation planning activities since early 2003.

By law, PDM project grants are dependent upon the state and local governments' demonstration that a comprehensive management process is in place after designated calendar dates. After November 1, 2003, FEMA approved local mitigation plans have been required as a condition of receiving PDM grants for state and local mitigation project grants. A local government that does not have a plan in place is not eligible to receive project grants funded under the annual PDM appropriations. After November 1, 2004, the FEMA-approved Standard State Mitigation Plan was required as a condition of receiving PDM project grants for State and local mitigation activities. The Standard State Mitigation Plan is also required for non-emergency assistance provided under the Stafford Act following a presidentially declared disaster, including Public Assistance restoration of damaged facilities (Categories C through G) and HMGP funding. Currently, any state with a FEMA-approved Enhanced State Mitigation Plan at the time of a disaster declaration is eligible to receive increased funds under the Hazard Mitigation Grant Program, based on 20 percent of the total estimated eligible Stafford Act assistance. Therefore, the development, maintenance, and updating of state and local multi-hazard mitigation plans is critical to maintaining eligibility for future FEMA funding.

AEMA has utilized the FMA in association with numerous projects consistent with its purpose of providing funding to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP.

NFIP participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants. FMA Project Grants are available to States and NFIP participating communities to implement measures to reduce flood losses. Ten percent of the Project Grant is made available to states as a Technical Assistance Grant. These funds may be used by a state to help administer the program. As stated earlier, communities receiving FMA Planning and Project Grants must be participating in the NFIP. Typical examples of eligible FMA projects funded in Alabama under this program in recent years include: elevation, acquisition, and relocation projects involving NFIP-insured structures.

The program encourages states to prioritize FMA project grant applications that include repetitive loss properties. The FMA grant program encourages states and communities to address target repetitive loss properties identified in the Agency's Repetitive Loss Strategy.

These include structures with four or more losses and structures with two or more losses where cumulative payments have exceeded the property value.

Alabama has also sought and HUD Community Development Block Grant (CDBG) monies as cost share funding for property acquisition projects that have been eligible under the CDBG program. The Disaster Relief Initiative for Hurricane Katrina Recovery added approximately \$95 million for recovery and mitigation project funding. This funding has gone towards developing long term community recovery plans for the communities of Mobile County as well as towards providing the required local matching funds for HMGP projects.

The US Army Corps of Engineers (USACE) maintains an active involvement in Alabama activities, particularly waterways and flood control management under its continuing watershed management mission. The State of Alabama can make a unique claim to have more miles of navigable waterways and shoreline than any other state in the continental US. Accordingly, among other natural hazards, it has numerous locations where population development and floodplain locations overlap and evolve into vulnerabilities. The USACE is active throughout the State supervising Federal waterways management components to prevent and reduce hazards as an ongoing part of maintaining navigation channels and drainage in major watersheds. AEMA works in concert with the USACE in some of these activities, and promotes funding of Hazard Mitigation projects through USACE funding sources when it is possible.

Historically, local matching funds for federally funded hazard mitigation projects are appropriated by counties and municipalities, and in concert with some quasi-public agencies and planning organizations. The State itself funds the operation and administration of AEMA, which coordinates all hazard mitigation activity in the State. Funding is provided by the State for the administration and operations of agencies and departments that manage, plan and implement hazard mitigation, including, but not limited to: AEMA, ADEM, and ADCNR. While the State does not fund projects directly out of the State's General Funds, it and AEMA have a demonstrated record of successful federal grant management with FEMA, HUD, and the USACE using locally obtained matching funding.

6.7 General Description and Analysis of the Effectiveness of Local Mitigation Policies, Programs and Capabilities

The State began the process of local mitigation plan development in early 2003 through planning grants ranging from \$10,800 to \$15,000 awarded to 22 county EMAs within the most populated and highest risk counties. As a result of this effort, the county EMAs have become the central coordinating agencies for local hazard mitigation planning. The following year, the State entered into an agreement with the Alabama Association of Regional Councils to provide funding, training, and technical support for the regional councils to develop the capabilities to support local mitigation planning. Grants were awarded to complete plans for the remaining 47 counties. By 2007, 64 of the 67 counties had adopted multi-jurisdictional plans that received FEMA approval with one county working towards formal adoption.

As of the date of this current State Plan, planning funds have been awarded to complete the two remaining county plans. Planning funds have also been awarded to seven regional councils to update another 34 plans, and three county EMAs received funds to update their plans. Sizeable planning grants are pending FEMA approval for updating plans for the State's highest risk counties – Mobile and Jefferson counties – and developing advanced risk assessments and other mitigation planning analysis tools to strengthen their local mitigation programs. Planning

grants are also pending for another nine counties. Details on the status of local planning are contained in **Section 7.2**.

The results of the mitigation plan development program in the State have tremendously increased the capabilities for local mitigation and community awareness. The All Hazards Task Force organized among the regional councils has established a statewide network of qualified mitigation planners on staff in each of the State's 12 Regional Planning Councils. All communities throughout the State now have access to these mitigation planners. Moreover, EMA staffs across the State have become proficient in administering local planning programs and overseeing the activities of local hazard mitigation planning committees.

The framers of Alabama's 1901 Constitution designed a system of State government that concentrates power at the State level. Alabama is not a "home rule" state - local authority must be granted by State acts, special legislation, or constitutional amendments. Due to the restraints placed in the Alabama Constitution, all but seven counties (Jefferson, Lee, Mobile, Madison, Montgomery, Shelby, and Tuscaloosa) in the state have little to no home rule. Instead, most counties in the state must lobby the Local Legislation Committee of the state legislature to get simple local policies such as waste disposal to land use zoning.

Despite the constitutional limitations on home rule, local governments have been able to function adequately. As further described in **Section 6.5**, legislation has been enacted over the years to allow localities with the capabilities to implement planning and regulatory tools for hazard mitigation. In 1935, the State passed legislation that empowered any municipality to establish planning commissions, pursue comprehensive planning, and enforce zoning ordinances and subdivision regulations, among other planning activities. This planning enabling legislation, however, did not include unincorporated areas of counties. Only Jefferson, Shelby, and Baldwin Counties, have authority by special legislation to extend planning and zoning regulations into unincorporated areas of these counties only. By State act, all local governments have authority to enact floodplain management ordinances, building codes, and subdivision regulations. (See **Section 6.5** for more detailed explanation of those authorities).

The capabilities of the localities to perform local mitigation measures and implement mitigation projects vary significantly among local governments. As part of the 2007 State Plan Update, a table summarizing local capabilities has been developed and included in **Appendix J**. The summary table lists all counties and municipalities of Alabama and notes various criteria for evaluating the capabilities of each of these localities, as follows:

- **Adopted Hazard Mitigation Plan** – Has the jurisdiction adopted a hazard mitigation plan that has been approved by FEMA?
- **National Flood Insurance Program** – Is the jurisdiction a regular member of the National Flood Insurance Program?
- **Community Rating System** – Does the jurisdiction participate in the Community Rating System Program, and if so, what is its class?
- **Comprehensive Plan** – Does the jurisdiction have a comprehensive plan that has been adopted in the last five years or is an update in progress?
- **Zoning** – Does the jurisdiction administer a zoning ordinance?
- **Subdivision Regulations** – Does the jurisdiction administer subdivision regulations?
- **Building Codes** – Does the jurisdiction administer building codes?
- **Capital Improvements Plan** – Does the jurisdiction program its annual capital expenditures on a multi-year capital improvements plan?

- **Building Code Effectiveness Grade Schedule** – What is the ISO classification of the jurisdiction under the Building Code Effectiveness Grade Schedule?
- **Property Protection Classification** – What is the ISO classification of the jurisdiction under the Property Protection Classification for fire protection?
- **Planner on Staff** – Does the jurisdiction have a full-time professional planner on staff?
- **Engineer on Staff** – Does the jurisdiction have a full-time professional engineer on staff?
- **Building Inspector on Staff** – Does the jurisdiction have a full-time building inspector on staff?
- **Certified Floodplain Manager** – Does the jurisdiction have a Certified Floodplain Manager on staff to administer its floodplain management ordinance?
- **Mitigation Project Experience.** What is the jurisdiction's level of experience with mitigation projects funded through a FEMA grant program?

While data collection is not yet complete, sufficient data has been collected to allow an assessment and analysis of local capabilities to be conducted. The results of this assessment show a wide disparity in capabilities. Generally, jurisdictions with the largest populations and revenues have the most capabilities. For instance, on the highest end of the capabilities scale is the City of Birmingham, the largest urban jurisdiction in the State with a 2000 census population of over 240,000. Birmingham has participated in the NFIP since 1978 and has two full-time Certified Floodplain Managers dedicated to flood hazard mitigation, including ordinance administration, outreach, property acquisitions, FEMA grant administration, and a host of other mitigation activities. The City participated in the development of and adopted the Jefferson County hazard mitigation plan and supplemented that plan with its own Floodplain and Storm Water Management Plan that was funded through an FMA planning grant. Birmingham is the highest rated CRS community in the State with a Class 6 rating, and it is at the highest end of ISO BCEGS and PPC ratings. It is currently updating its comprehensive plan, maintains a CIP, and administers a zoning ordinance, building codes, and subdivision regulations and has a staff of professional planners, engineers, architects, and certified building inspectors. It has the most experience with FEMA grant programs, having implemented over \$15 million in flood hazard mitigation buyouts over the last 15 years. Previously, the USACE completed a \$30 million flood buyout. The City of Huntsville closely follows Birmingham's lead in demonstrating local hazard mitigation capabilities.

For the most part, however, most county and municipal jurisdictions in Alabama have rural populations and very limited revenue resources. Consequently, capabilities in rural counties are typically very low. A typical rural Alabama town has little or declining growth and might have a staff of two or three housed in a small town hall, with no plan, building codes, zoning, or other regulatory means to implement mitigation measures. These small communities depend on support from their county governments, which, even in rural locations, have greater means to lend some local support to hazard mitigation.

Another nationwide community preparedness program that Alabama communities participate in is the National Weather Service's (NWS) StormReady Program (SRP). SRP helps communities develop plans to handle all types of severe weather, including, but not limited to tornadoes and tsunamis. By providing emergency managers with clear guidelines on how to improve their hazardous weather operations, SRP encourages communities to take a proactive approach toward improving their weather operations. These guidelines help communities implement procedures that reduce the potential for disastrous, weather related consequences.

To become a StormReady community, several guidelines must be met. The guidelines include the following:

- Establish a 24-hour warning point and emergency operations center
- Have more than one way to receive severe weather warnings and forecasts and to alert the public
- Create a system that monitors weather local weather conditions
- Promote the importance of public readiness through community seminars and other outreach methods
- Develop a formal hazardous weather plan to include training severe weather spotters and conducting emergency exercises.

Some benefits of being a StormReady community include increased scores on the Community Rating System (CRS) which in turn can lower NFIP insurance rates, along with maintaining local plans and increased public awareness and preparedness. Counties, communities, and supporters that are StormReady are identified below in **Table 6.7-1**. Counties, communities, and supporters must be recertified every three years.

**Table 6.7-1
StormReady Counties, Communities and Supporters
Since August 2007**

Date of Recognition	County
January 31, 2006	Blount
July 17, 2006	Calhoun
October 8, 2004	Cherokee
November 16, 2004	Chilton
May 13, 2005	Cleburne
November 16, 2004	Dallas
August 9, 2007	Etowah
December 4, 2006	Fayette
November 16, 2004	Jefferson
September 19, 2006	Lee
December 21, 2005	Marion
November 16, 2004	Montgomery
April 8, 2005	Shelby
September 19, 2006	Talladega
May 12, 2006	Tallapoosa
April 14, 2006	Tuscaloosa
April 8, 2005	Russell
January 31, 2006	Walker
January 31, 2006	Winston
	Communities
October 28, 2005	City of Livingston, Sumter County
January 31, 2006	City of Columbiana, Shelby County
	Supporters
August 9, 2007	Eastdale Mall, Montgomery
August 25, 2005	Quintard Mall, Oxford
December 19, 2004	Summit Lifestyle Center, Birmingham
September 19, 2006	Talladega Super Speedway, Talladega

This overall state of capabilities in Alabama points to the need for a strong State program of support to increase the capabilities of these rural communities and sustain and strengthen the capabilities of larger jurisdictions. The State EMA fully recognizes these needs for continuing mitigation planning support and has been actively taking steps to expand its technical support and work with locals to identify funding opportunities. The State intends to increase support for localities to receive professional planning and engineering services for hazard mitigation. This can be accomplished through continuing coordination with county EMAs, the All Hazards Task Force of the Regional Planning Councils, increasing participation in NWS's StormReady Program, and working to obtain planning funds (PDM, CDBG, HMGP, etc) available to improve and expand local mitigation activities. As part of the State's Enhanced Plan initiatives, technical and funding support programs will be examined and new programs will be developed to improve local capabilities among all levels and types of jurisdictions throughout the State.

6.8 Identification, Evaluation and Prioritization of Mitigation Actions

This section describes the State of Alabama's process for identifying, evaluating and prioritizing the State's hazard mitigation goals, objectives and actions. Several State agencies provided recommendations for goals, objectives and actions to be included in the plan.

In the spring of 2007, the SHMT was reconvened in order to update the Alabama State Hazard Mitigation Plan. This process is discussed in more detail in **Section 4 – Planning Process**. While the representative agencies on the team remained the same, individuals participating in the 2007 plan update varied from the 2004 planning process. At the April 2007 SHMT meeting team members were directed to the AEMA website, where the existing 2004 State Hazard Mitigation Plan was posted, to refresh individuals understanding of the existing plan. Additionally, agencies were provided lists of the actions and associated objectives identified in the 2004 plan for their review and comment. Agencies provided feedback on completed, in progress, deferred, and/or deleted actions. Further, the planning team reviewed local plans to verify that goals and objectives identified within these plans were compatible with the goals and objectives identified at the State level. In turn, State goals and objectives were determined to be reflective of local goals, objectives, and actions. This local plan review is discussed in greater detail in **Section 7.3**.

6.8.1 Identification and Evaluation of Mitigation Actions

The process employed during the 2007 update of the State Hazard Mitigation Plan's mitigation actions was similar to that employed in 2004. First, the SHMT determined that each agency represented on the SHMT (and the various other organizations that were included in, and informed of, SHMT activities – see **Section 4**) should be allowed to provide input on goals, objectives, etc. at both the statewide level as well as from the standpoint of the organizations they represent. To accomplish this, AEMA developed a questionnaire based on the goals, objectives, and actions from the 2004 plan and provided the document to the SHMT. This questionnaire was sent to all members of the SHMT and the other contact organizations, with a request to respond within approximately two weeks. The various organizations provided feedback as to whether the goals from the 2004 Plan were relevant in 2007. Further, comments were solicited from the SHMT as to the potential need for additional goals to address any changing conditions.

Second, the SHMT provided input on the status of the actions identified in the 2004 plan. To accomplish this, another questionnaire was developed for each agency listed as a responsible agency in the 2004 Plan. The questionnaire contained the goals, objectives, and specific actions identified in the Plan and requested information from the agency on the progress made in implementing the project, including whether or not the project was completed or on-going, or if the action was deferred and if there were any specific reasons why it was deferred. Additionally, the agencies were requested to provide additional actions that they would like to see included in the 2007 update. The results of this input were compiled and included in the Plan Update, currently under review by the SHMT.

Third, AEMA compiled existing plans from the State and local levels and reviewed them to identify goals, objectives, strategies, etc. As noted elsewhere, many of the local and county level plans were under development at the same time as the initial State plan (2004), so it was not possible to review all of these in time to incorporate the goals into 2004 version of the plan. However, by the spring of 2007, most local plans were complete and reviewed as part of the 2007 update. This review ensured that the State’s goals, objectives and actions provided an overarching and inclusive framework under which the local plans could operate.

The identification of mitigation actions has been shaped by the events that occurred over the past three years. Because of these events, the prioritization of actions has also changed and been re-evaluated. In 2007, AEMA obtained feedback on team/agency specific actions which also aided in the prioritization. The updated prioritization of these mitigation actions can be found in **Section 6.8.6**.

6.8.2 Mitigation Actions

How Recent Events have Influenced Mitigation Actions

Since the 2004 Plan was adopted, the State of Alabama was faced with a series of potential natural hazard threats. To the misfortune of countless persons in the State many of these threats transformed into actual disasters. However, the State of Alabama pursued, and continues to pursue, a variety of natural hazard mitigation measures that reduced the potential impact of these disasters and the impact of future disasters.

Since adoption of the 2004 Plan, there have been numerous large scale disasters across the state and several local events. Specifically, there have been four Federal Disaster Declarations (see **Table 6.8-1**).

**Table 6.8-1
Recent Disasters (2004 – 2007)**

Date	Type of Incident	Declaration #
September 15, 2004	Hurricane Ivan	1549
July 10, 2005	Hurricane Dennis	1593
August 29, 2005	Hurricane Katrina	1605
March 1, 2007	Severe Storms and Tornadoes (Enterprise Tornadoes)	1687

These large scale disasters played a significant role in shaping the hazard mitigation priorities within Alabama over the last three years. Each disaster revealed strengths and weaknesses

within the hazard mitigation program, and the State of Alabama adjusted its subsequent mitigation actions to address these weaknesses accordingly.

Hurricane Ivan revealed a lack of sheltering capacity within the coastal counties of Baldwin and Mobile. In support of the overarching strategy identified in the 2004 Plan to “reduce risks through actions and policies that limit the effects of natural hazards on the physical assets and citizens of Alabama,” the State of Alabama began the process of increasing shelter capacity across the State. In the three years since Hurricane Ivan, 39 shelter projects have been pursued using HMGP funds totaling more than \$13.5 million. The impact of Hurricane Ivan also allowed the State an opportunity to pursue additional hazard mitigation projects supporting the goals and objectives identified in the previous version of the plan utilizing HMGP funds.

In August of 2005, the Gulf States experienced one of the worst disasters in American history when Hurricane Katrina hit. Hurricane Katrina caused catastrophic damage to counties and parishes bordering the Gulf Coast. A State of Emergency was declared in Alabama approximately two days before the hurricane made landfall, and evacuations were in coastal areas. In Alabama, the coastline received the most damage as it was impacted by near record storm surges and high winds. Damage spread inland as the yet of the hurricane traversed the Mississippi-Alabama state boundary causing inland flooding and spreading high winds throughout the State.

Most recently, on March 1, 2007 a series of severe thunderstorms moved through the State spawning several tornadoes. One of these, an EF-4 on the new "Enhanced Fujita Scale," struck the town of Enterprise, Alabama. The resulting devastation drew the focus of Alabama mitigation community to tornadoes. At the time of this revision, the State is reviewing potential mitigation actions that would help to mitigate the types of damages experienced in Enterprise.

Being proactive, the State of Alabama does not wish to “chase” the last disaster in terms of identifying and implementing mitigation actions. As such, when funding has allowed, the state has pursued a core group of mitigation actions that are directed at achieving the goals identified in the 2004 PLAN. These types of projects include:

- Elevation;
- Acquisition;
- Drainage improvements;
- Individual and community shelters;
- Siren program; and
- Improved identification of threat through floodplain mapping.

Mitigation Implementation (2004-2007)

Over the last three years, the State of Alabama has had success in implementing actions from the 2004 plan. Actions identified in the 2004 plan that have been completed or that are currently undergoing implementation are listed in **Table 6.8-2**. **Table 6.8-3** highlights the core group of mitigation actions pursued by the State of Alabama using HMGP funds after each disaster.

**Table 6.8-2
Completed / Ongoing Actions from the
2004 State Hazard Mitigation Plan**

Goal	Completed / Ongoing Action	Hazard Addressed	Status
Goal 1: Establish a Comprehensive Statewide Hazard Mitigation System	1.1.1 Conduct an evaluation of the expanded NOAA Weather Radio program to determine the overall effectiveness of the system following the completion of the pilot project.	All	Ongoing
	1.2.1 Adopt a common Geographical Information System (GIS) data system throughout State, county and local government.	All	Ongoing
	1.3.2 Develop and maintain a Continuity of Operations plan for the ADEM including periodic review and updates.	Earthquakes	Ongoing
	1.4.2 Increase community awareness about the need and process for requesting floodplain mapping.	Flood	Ongoing
	1.4.3 Request funding from FEMA to update state floodplain maps.	Flood	Ongoing
	1.4.4 Evaluate community flood studies and FIRMS for accuracy.	Flood	Ongoing
	1.4.15 Reduce the flooding risk to communities by acquiring property located in the 100-year floodplain and return it to open space.	Flood	Ongoing
	1.6.1 Maintain membership and participation in the Central United States Earthquake Consortium.	Earthquakes	Ongoing
	1.6.3 Perform hazard mapping to delineate areas susceptible to liquefaction during earthquakes.	Earthquakes	Complete
	1.6.6 Establish a system of six short-band seismic stations within the state.	Earthquakes	Ongoing
Goal 2: Reduce Alabama's Risk from Natural Hazards	2.1.4 Establish regulations that address disclosure of natural hazard risk during real estate transactions.	All	Ongoing
Goal 4: Reduce Alabama's Vulnerability to Hazards	4.2.2 Establish provisions to ensure that program designed for moving families from dependency to self-sufficiency continue after a natural or man-made disaster.	All	Ongoing

Note: All actions are referenced from the 2004 plan.

**Table 6.8-3
Additional Completed / Ongoing Actions Supporting the 2004 Plan**

Disaster	Mitigation Action Type	Number of Projects Completed / Ongoing	Total Amount of Funding Allocated for Actions
Hurricane Ivan (DR-1549)			\$41,485,128
	Generators	62 (approved)	\$4,148,513 ² \$2,152,780 ¹
	Alert Notification System	47 (approved)	\$4,148,513 ² \$2,723,604 ¹
	Acquisition	11	\$6,153,358
	Community Shelters	22	\$7,045,167
	Drainage	11	\$7,251,421
	Elevation	4	\$185,438
	Engineering	4	\$3,256,079
	Individual Shelters	9	\$734,862
	Wind Retrofits	4	\$1,005,240
	Planning Efforts	4	\$2,903,959
Hurricane Dennis (DR-1593)			\$1,646,946
	Generators	n/a	\$82,347
	Alert Notification System	1 (pending)	\$82,347
	Acquisition	--	--
	Community Shelters	1	\$533,651
	Drainage	1	\$888,750
	Elevation	1	\$58,526
	Engineering	--	--
	Individual Shelters	--	--
	Wind Retrofits	--	--
	Planning Efforts	n/a	\$115,286
Hurricane Katrina (DR-1605)			\$71,736,951
	Generators	3 (approved) 51 (pending)	\$3,586,848 ² \$182,250 ¹
	Alert Notification System	12 (approved) 57 (pending)	\$3,586,848 ² \$396,013 ¹
	Acquisition	1 (approved) 41 (pending)	\$7,534,073 ¹
	Community Shelters	6 (approved) 10 (pending)	\$5,867,892 ¹
	Drainage	22 (pending)	n/a
	Elevation	6 (pending)	n/a
	Engineering	--	--
	Individual Shelters	1 (approved) 16 (pending)	\$430,531 ¹
	Wind Retrofits	27 (pending)	n/a
	Planning Efforts	1 (approved) 20 (pending)	\$5,021,587 ²

¹ Dollar amount is for approved project(s) only ² Dollar amount available for entire mitigation category
Note: Number of Projects and Funding Amounts are as of 5/8/2007

Mitigation Successes in Alabama

While all mitigation projects, big and small, have contributed to the effectiveness of Alabama's recovery and mitigation, several projects have been highlighted as Alabama "Success Stories."

City of Tarrant Acquisitions

In April 2000, the City of Tarrant was devastated by the flooding of Five Mile Creek. Due to a flash flood event, the creek rose above its banks and caused five feet of moving water through a mobile home park that was adjacent to the creek. Over 120 homes were destroyed and many people were left homeless. An estimated \$2 million in damages occurred.

In the aftermath, community leaders met to discuss the issue of repeated flooding along the shores of the creek and the human and economic losses incurred with each flooding incident. The City of Tarrant applied for HMGP funds to acquire the mobile homes and the vulnerable property. Upon approval from FEMA, the grant money was released to the City of Tarrant through AEMA. The City then acquired the damaged mobile homes and the vulnerable property, which was developed into a community park. The Chief William C. "Billy" Hewitt Park is now enjoyed by the citizens of Tarrant.

Bay Minette Community Shelter

Bay Minette, AL is located in Baldwin County on the north side of the Interstate 10 hurricane evacuation zone. The Baldwin County Emergency Operations Center will coordinate with the Baldwin County Department of Human Resources, and the Gulf Coast Chapter of the American Red Cross to operate a special needs shelter. Plans call for this facility to be fully equipped and operational for evacuees meeting special needs criteria. The shelter will provide medication and record security, transportation and transfer needs, and report to the state Emergency Operations Center for public notification of availability.

The shelter will have uninterrupted power supply, refrigeration, food preparation area, ample shelter space, and storage for emergency supplies. This shelter will be constructed with 12 inch reinforced masonry walls and an 8 inch concrete deck. The structure will be capable of withstanding sustained winds of 210 miles per hour. The emergency generator, in addition to meeting the requirements in FEMA 361, will also provide operational support for special needs occupants that have critical power needs. The facility will comply with the guidelines of FEMA 361 and all requirements of the American with Disabilities Act (ADA).

Baldwin County has over of 28,000 disabled residents, and the county has a significant number of citizens aged 65 years or older. In addition to hurricanes, Baldwin County is one of the most at risk counties for tornado (see **Section 5.5**). These natural hazards increase the importance of providing a safe refuge for residents with special needs in Bay Minette.

Baldwin County Cattle and Fair Association (BCCFA) Community Shelter Complex

Baldwin County, Alabama is located between the shores of Gulf Mexico and Mobile Bay in an area identified with severe risk and threat from hurricanes, thunderstorms, and tornadoes. The Baldwin County Cattle and Fair Community Shelter will be part of the Baldwin County Fairgrounds, centrally located within the county, and sited away from storm surge and associated flooding. The BCCFA, working in conjunction with the Baldwin County EMA, and the Baldwin County Commission, plan to use a new fairgrounds complex to provide citizens with both short and long term sheltering in the area. Alabama EMA submitted a HMGP project application to FEMA. The project consists of constructing a community shelter capable of providing short term emergency shelter for 5,000 people, and long term shelter for 1,900

people. The facility will contain a climate controlled area for sheltering in excess of 19,000 square feet. The BCCFA is donating the property for the shelter to Baldwin County, which will be used by the Baldwin County EMA. The facility will adhere to the guidelines specified in FEMA 361, *Design and Construction Guidance for Community Shelters*.

Flood Map Modernization Program

In September 2002, the State of Alabama became a Cooperating Technical Partner (CTP) with FEMA under the Flood Map Modernization Program. The goal of the program is to update maps so that the flood insurance program is more closely aligned with actual risk, wise floodplain management is encouraged, and the public's awareness of flood hazards is increased. The Alabama Department of Economic and Community Affairs – Office of Water Resources (OWR) is responsible for implementing the Map Modernization program within the State. The national program has been identified as a cornerstone for helping communities become better prepared for flood disasters. To date, OWR has completed or is in the process of completing Digital Flood Insurance Rates Maps (DFIRMs) and updating Flood Insurance Studies (FISs) in the following counties:

- Madison
- Morgan
- Mobile
- Baldwin
- Jefferson
- Shelby
- Cullman
- Randolph
- Autauga
- Clarke
- Dale
- Elmore
- Escambia
- Etowah
- Henry
- Jackson
- Lauderdale
- Lee

Additionally, the scoping activities are underway in Blount, Chilton, Coffee, Colbert, Crenshaw, Fayette, Franklin, Lamar, Lawrence, Limestone, Marion, and Winston Counties. Scoping activities involve working with the local communities to identify critical needs in the mapping update. At the end of the initial implementation of the map modernization program, each county's FIRMs be converted to a common the digital format, allowing for wider and easier access by individuals.

Mitigation – 2007 and Beyond

At this time, Alabama has chosen not to delete any projects from 2004 for future consideration. **Tables 6.8-4** through **6.8-9** indicate completed and/or ongoing projects supporting 2004 goals and objectives. The remaining projects have been deferred until such time as funding and situation permits. They are included in the 2007 Plan Update, along with new actions identified by the SHMT and others during the plan update process.

New actions and objectives were obtained by distributing a questionnaire to get feedback on existing objectives, and ideas for new ones as well. The updated mitigation action plan showing all actions deferred from the 2004 Plan as well as new actions identified for the 2007 plan update are shown in **Tables 6.8-10** through **6.8-25**.

**Table 6.8-4
Proposed Goals, Objectives, and Actions Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed
Improve local and state capability of study natural hazards	1.1.1 Conduct an evaluation of the expanded NOAA Weather Radio program to determine the overall effectiveness of the system following the completion of the pilot project.	All
	1.1.2 Inventory and catalog natural hazards studies, maps, digital data and other information available from city, county, state, federal, university, private, and other sources.	All
	1.1.3 Establish a schedule to provide state and local offices with current information on past events (including damages).	All
	1.1.4 Develop a comprehensive record of ADEM's assets and operations.	All
	1.1.5 Update NOAA assessments of past events and damages.	All
	1.1.6 Routinely collect, monitor, and evaluate selected climatic, water supply and water use data to identify at an early stage the onset of a drought or potential for drought, geographic extent of the affected area and changes in the drought levels.	All
Improve the statewide availability of risk information, particularly in GIS format	1.2.1 Adopt a common GIS data system throughout state, county and local government.	All
	1.2.2 Maintain a GIS inventory of all critical facilities, large employers / public assembly areas and lifelines.	All
	1.2.3 Utilize GIS to evaluate the vulnerability of critical facilities, large employers / public assembly areas and lifelines by comparing them with hazard-prone areas.	All
	1.2.4 Provide a prioritized list of the natural risks to all departmental facilities and remote monitoring sites.	All
	1.2.5 Review local and county mitigation plans following disasters or serious hazard occurrences in order to evaluate risk assessments and mitigation priorities.	All
Reduce the impact of hazard events (i.e., loss of service) for state departmental functions	1.3.1 Update contact information in the Departmental Emergency Operation SOP on a regular basis and review and update biannually.	All
	1.3.2 Develop and maintain a Continuity of Operations plan for the ADHR including periodic review and updates.	All
	1.3.3 Develop a plan to protect public records.	All
	1.3.4 Develop a plan to protect data.	All
	1.3.5 Develop and maintain a Continuity of Government Plan.	All
	1.3.6 Coordinate with State entities to develop Continuity of Operations Plans for all hazards, including periodic review and update of developed plans.	All
Enhance flood mitigation efforts	1.4.1 Identify channel and ditches that must be improved to provide maximum drainage capacity.	Flood
	1.4.2 Increase community awareness about the need and process for requesting floodplain mapping.	Flood
	1.4.3 Request funding from FEMA to update state floodplain maps.	Flood
	1.4.4 Evaluate community flood studies and FIRMS for accuracy.	Flood
	1.4.5 Develop comprehensive regional shoreline erosion and hazard mitigation plan.	Flood

**Table 6.8-4
Proposed Goals, Objectives, and Actions Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	
	1.4.6 Increase state and local agencies' ability to issue flood warnings.	Flood	
	1.4.7 Encourage each community to include critical facilities such as hospitals, nursing homes, schools, police stations, fire stations and emergency operations centers indicated on each floodplain map.	Flood	
	1.4.8 Coordinate activities between the state and local or regional water management authorities.	Flood	
	1.4.9 Improve the state's channel carrying capacity.	Flood	
	1.4.10 Ensure local communities utilize flood control measures, including the use of retention / detention basins and other stormwater management practices to retard the flow of water and reduce downstream damage.	Flood, Dam	
	1.4.11 Implement the use of erosion control measures to protect infrastructure from floods.	Flood	
	1.4.12 Modernize and improve access to flood gates for levee systems.	Flood	
	1.4.13 Establish a schedule to inspect, repair and maintain state and local community levees.	Flood	
	1.4.14 Reduce the number of unsafe state dams.	Flood, Dam	
	1.4.15 Reduce the flooding risk to communities by acquiring property located in the 100-year floodplain and return it to open space.	Flood	
	Enhance hurricane mitigation efforts	1.5.1 Review coastal NFIP maps for potential updates.	Flood
		1.5.2 Update the COHIS project on an annual basis.	Flood
	Enhance earthquake mitigation efforts	1.6.1 Maintain membership and participation in the Central United States Earthquake Consortium.	Earthquake
		1.6.2 Upgrade the State's monitoring capabilities for earthquakes.	Earthquake
		1.6.3 Perform hazard mapping to delineate areas susceptible to liquefaction during earthquakes.	Earthquake
1.6.4 Perform research to understand the geologic conditions that cause earthquakes in Alabama.		Earthquake	
1.6.5 Identify areas within Alabama that are most susceptible to earthquakes.		Earthquake	
1.6.6 Establish a system of six short-band seismic stations within the state.		Earthquake	
Enhance landslide mitigation efforts	1.7.1 Perform hazard mapping to delineate areas susceptible to landslides and earthquakes.	Landslide	
	1.7.2 Establish and maintain a database on landslides in the state.	Landslide	
Enhance sinkhole mitigation efforts	1.8.1 Establish and maintain a database on sinkholes in the state.	Sinkhole	

**Table 6.8-5
Proposed Goals, Objectives, and Actions Goal 2
Reduce Alabama’s Risk from Natural Hazards**

Objectives	Action	Hazard Addressed
Reduce the threat of injury and loss of life from natural hazards	2.1.1 Implement Legislation Title 11-19-1 through 24.	All
	2.1.2 Ensure all state codes and standards ensure the protection of life.	All
	2.1.3 Ensure all structures in the state meet minimum standards of life safety.	All
	2.1.4 Establish regulations that address disclosure of natural hazard risk during real estate transactions.	All
	2.1.5 Maintain tornado safe room initiatives statewide.	Wind
	2.1.6 Expand the number of local governments that include hazard reduction planning into their land use plans and development regulations.	All
	2.1.7 Assist K-12 schools, state colleges and universities to develop vulnerability assessments, mitigation plans and mitigation projects to improve safety in their most vulnerable buildings.	All
	2.1.8 Train emergency responders.	All
	2.1.9 Promote, strengthen and coordinate emergency response plans.	All
	2.1.10 Provide volunteer service opportunities that provide direct support to first responders, disaster relief and community safety.	All
	2.1.11 Develop a comprehensive tornado warning system in coordination with local communities.	Wind
	2.1.12 Establish a sustainable hurricane shelter strategy to provide protection for citizens of the coastal communities.	Wind
Reduce natural hazard impact on individual properties, businesses and public facilities	2.2.1 Increase state agency accessibility to critical power lines.	All
	2.2.2 Identify and prioritize utility right of ways for tree and brush removal.	All
	2.2.3 Develop program to remove trees most likely to fall into utility ROWs and replace them with species that do not pose as a great a threat to power lines.	All
	2.2.4 Encourage applicable local governments to retrofit critical facilities so that they will sustain natural disasters.	Wind
	2.2.5 Advance provision for electrical generators through FEMA grant programs.	All
	2.2.6 Advance provision for electrical generators for state colleges and universities, including two year colleges through FEMA grant programs, as part of an initiative to develop and maintain all-hazard shelter capacity.	All
	2.2.7 Strengthen all state building codes and enforcement.	All
	2.2.8 Encourage homeowners to retrofit their homes for category F-0 to F-2 tornadoes by providing information materials (handouts, booklets and videos).	Wind
	2.2.9 Encourage homeowners to retrofit their homes for category 1-3 hurricane winds.	Wind
	2.2.10 Develop an inventory of the number of radio repeater sites and dispatch centers currently without backup electricity.	All

**Table 6.8-5
Proposed Goals, Objectives, and Actions Goal 2
Reduce Alabama’s Risk from Natural Hazards**

Objectives	Action	Hazard Addressed
	2.2.11 Ensure all radio repeater sites and dispatch centers have contingency plans in place for backup electricity in case of a natural hazard.	All
	2.2.12 Develop model ordinance for Gulf-fronting communities requiring additional setbacks for Gulf-fronting properties.	Flood
Reduce natural hazard impact on natural resources	2.3.1 Develop hazard mitigation policies to protect the environment.	All
	2.3.2 Preserve and rehabilitate natural systems to serve natural hazard mitigation functions (i.e., floodplains, wetlands, watershed and urban interface areas).	Flood
	2.3.3 Adopt ordinances or land use regulations requiring developers to incorporate both natural hazard mitigation measures, as well as environmental protection and restoration activities into their construction goals.	All
	2.3.4 Encourage local floodplain managers to continue to evaluate the increased hazards posed by the encroachment of non-native plant species into floodways.	Flood
	2.3.5 Encourage local floodplain managers to continue to account for and incorporate wetlands protection and mitigation sites into the planning process when preparing new studies for watercourses.	Flood

**Table 6.8-6
Proposed Goals, Objectives, and Actions Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed
Improve the State’s ability to protect new and future residential and commercial structural assets	3.1.1 Direct urban growth away from hazard areas.	All
	3.1.2 Require the incorporation of natural hazard mitigation measures in all new public construction.	All
	3.1.3 Promote enforcement of applicable building codes in hazardous areas.	All
	3.1.4 Ensure local building codes require the latest construction techniques and materials designed to reduce the effects of natural hazards on residential and commercial structures.	All
	3.1.5 Encourage state agencies to adopt a “No Adverse Impact” approach to their development and to share development plans with communities.	All
	3.1.6 Develop design criteria for marinas, piers and other coastal structures with respect to storm resistance.	Wind, Flood
	3.1.7 Review new development proposal prior to issuance to floodplain development permits.	Flood
	3.1.8 Develop coastal community resiliency plans to react to stressors on the jurisdiction (i.e. natural hazards).	
Reduce the probability that	3.2.1 Disseminate information about new development and build-out potential in hazard areas.	All

**Table 6.8-6
Proposed Goals, Objectives, and Actions Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed
new or future residential and commercial structural assets will be affected by hazards	3.2.2 Provide technical assistance to local governments in developing, adopting and implementing land use ordinances.	All
	3.2.3 Inform land and resource managers, including those engaged in planning and zoning, about potential hazards in their jurisdictions.	All
	3.2.4 Develop and incorporate a new standard in all statewide building codes that require a standard system be incorporated into window design and protection for all new construction.	Wind
	3.2.5 Encourage the retrofitting of existing buildings for window protection through tax incentives or insurance rate reduction.	Wind
	3.2.6 Ensure that building inspectors are trained in the enforcement of the adopted codes.	All
	3.2.7 Disseminate information about Section 106 of the NFP Act and its ramifications in a disaster.	All
	3.2.8 Encourage retrofit.	Wind
	3.2.9 Look at critical facilities to determine which can be brought to FEMA 361 retrofit which can support.	Wind

**Table 6.8-7
Proposed Goals, Objectives, and Actions Goal 4
Reduce Alabama’s Vulnerability to Hazards**

Objectives	Action	Hazard Addressed
Improve the state’s ability to prepare for a natural or man-made disaster	4.1.1 Provide funding and technical assistance to state agency and local and tribe governments to prepare hazard mitigation plans.	All
	4.1.2 Improve the state’s capability to administer pre- and post-disaster mitigation programs.	All
	4.1.3 Establish security system within the Gordon Persons Building to ensure that critical functions are not interrupted due to terrorist activities.	All
	4.1.4 Improve safety of rural roads by developing a rural road paving and a roadside ditching plan so that they remain accessible during post event.	All
Improve the state’s ability to respond to a natural or man-made disaster	4.2.1 Initiate a system to test the ability of the local emergency manager to activate the Emergency Alert System.	All
	4.2.2 Establish provisions to ensure that program designed for moving families from dependency to self-sufficiency continue after a natural or man-made disaster.	All
	4.2.3 Develop and maintain a Continuity of Operations plan for the ADEM.	All
	4.2.4 Provide training for local officials in mitigation activities.	All

**Table 6.8-8
Proposed Goals, Objectives, and Actions Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed
Increase stakeholder awareness about the hazards identified in the State Plan	5.1.1 Develop a public outreach and awareness campaign to educate stakeholders on the hazards identified in the state's hazard mitigation plan.	All
	5.1.2 As part of the public outreach plan, ensure the public and forest managers are informed about the importance of implementing Best Management Practices on forest land.	All
	5.1.3 Develop an earthquake, landslide and sinkhole education program for the state's Boards of Education to use in each school system.	Earthquake, Landslide, Sinkhole
Increase stakeholder awareness about hazard mitigation preparedness and response	5.2.1 Develop a public outreach and awareness campaign to educate stakeholders about appropriate actions to take regarding disaster preparedness and response, public health issues, life supporting first aid and volunteer service.	All
	5.2.2 Develop an emergency preparedness and response plan about earthquakes, landslides and sinkholes for the state's Boards of Education to use in each school system.	Earthquake, Landslide, Sinkhole
	5.2.3 Increase the number of homeowners and renters, who live in flood prone areas, to have flood insurance through NFIP.	Flood
	5.2.4 Increase the number of communities who participate in the Community Rating System program.	Flood
	5.2.5 Educate local communities about how to improve the CRS classification of other cities and Indian communities within their jurisdictions.	Flood
	5.2.6 Conduct hazard mitigation education and awareness workshops for local government officials and the private sector.	All
	5.2.7 Provide technical assistance (community assistance visits, contacts, workshops and/or publications) to local officials on proper implementation of the NFIP.	Flood

**Table 6.8-9
Proposed Goals, Objectives, and Actions Goal 6
Establish Interagency Hazard Mitigation Cooperation**

Objectives	Action	Hazard Addressed
Integrate hazard mitigation into all state and local response / recovery activities	6.1.1 Facilitate the coordination of all state and federal emergency management activities.	All
	6.1.2 Facilitate the coordination of state and local emergency management activities.	All
	6.1.3 Ensure hazard mitigation programs are included in all state and local economic development and community planning.	All
	6.1.4 Expand the use of the State Hazard Mitigation team by adding representatives from other state, regional and federal agencies.	All
	6.1.5 Establish a schedule to update the SHMT on existing and upcoming hazard mitigation activities throughout the state.	All

**Table 6.8-9
Proposed Goals, Objectives, and Actions Goal 6
Establish Interagency Hazard Mitigation Cooperation**

Long-term recovery following a disaster	6.2.1 Integrate mitigation projects into recovery process through Public Assistance, Individual Assistance and Small Business Administration programs.	All
	6.2.2 Integrate mitigation projects through education of local community and Public Assistance applicants.	All

6.8.3 Prioritization of Mitigation Actions

The identified mitigation actions and objectives in this section are not ordered by priority, nor are they categorized as being of high, medium or low priority. AEMA requires any mitigation project proposed for funding through the federal hazard mitigation grant programs to:

1. Support the goals and objectives of the State Hazard Mitigation Plan.
2. Reduce identified risk.
3. Prevent repetitive losses.
4. Protect critical areas, including frequently flooded areas and geologically hazardous areas.

Applicants develop a list of planning and construction projects for federal hazard mitigation grants. When funds become available, AEMA funds eligible projects. Available resources are used to address a variety of hazards Statewide. Pouring most or all available resources into small areas (three to five flood prone counties, for example) or for limited mitigation tasks (for elevating or purchasing of repetitive loss properties, for example) is politically untenable and it discourages non-funded jurisdictions from developing hazard mitigation programs.

Implementing every potential action identified in **Section 6.8.3** over a three year period is not realistic. Therefore, the State of Alabama has decided to put together a state hazard mitigation strategy based on the potential timeframe for action/project implementation. This strategy has been divided into three temporal phases; near-, mid-, and long-term, with projects assigned to each phase according to the potential timeframe for execution. Near term is for projects that have the potential to be put into action within zero to two years. Mid-term actions could be implemented within three to six years. Long-term actions are those actions on the horizon for the state, looking forward a minimum of seven years for potential execution.

Criteria similar to that employed in the STAPLE+E method were used to determine the likely timeframe for each action’s initiation in this plan. These criteria included social, technological, administrative, political, legal and economic constraints, with political and economic, i.e. funding, often being the largest limiting factor. Actions with minimal constraints were mapped to the near-term phase, and those with the largest obstacles were placed under the long-term. The remaining projects were placed into the mid-term action plan.

The process of assigning actions to one of the three timeframes should not be considered a final determination of the project’s initiation or completion date. This process is a fluid process; and constraints used in the initial determination change, such as availability of funding and priorities of the current political climate. Actions can and should be re-evaluated and adjusted. Placement of an action in a mid- or long-term time frame does not preclude the State or local

entities from implementing that action at an earlier time if conditions warrant. Projects can also be deferred from near- and mid-term time frames if the State so decides.

The structure of the action plan is meant to serve as a guide to assist State and local officials and administrators in the determination of which mitigation actions could be implemented within the State of Alabama. Additionally, during the time following a natural disaster, this action plan can be a tool for the State in determining which projects should be pursued.

6.8.4 Addressing Cost-Effectiveness, Environmental Soundness, Technical Feasibility

Any State government construction project – regardless of potential funding source – has to be cost-effective, technically feasible and meet all appropriate Federal, State, and local environmental laws and regulations before it is started. State government projects funded by Federal hazard mitigation grant programs administered by AEMA have to meet specific criteria related to cost-effectiveness, environmental soundness and technical feasibility.

The cost of many of the actions outlined in this plan is staff time to review measures, provide technical assistance to local communities, or develop internal guidelines and plans. Actions documented in this plan try to encompass a variety of specific projects that could be pursued at the State and local levels. Due to this, specific project costs can not be determined until such time as a project scope has been developed. To determine the cost-benefit relationship of the project, the overall implementation of the action was evaluated. **Tables 6.8-10** thru **6.8-25** detail these projects.

6.8.5 Mitigation Action Plan

**Table 6.8-10
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve local and state capability to study natural hazards	1.1.2 Inventory and catalog natural hazards studies, maps, digital data and other information available from city, county, state, federal, university, private, and other sources.	All	AEMA	Near-Term	Staff Time	Maintaining a comprehensive invoice/catalog will improve the use of the data by agencies.
	1.1.3 Establish a schedule to provide state and local offices with current information on past events (including damages).	All	AEMA	Near-Term	Staff Time	Updating state and local officials with current information will improve future decisions regarding mitigation.
	1.1.4 Develop a comprehensive record of ADEM's assets and operations.	All	ADEM	Near-Term	Staff Time	Maintaining a comprehensive record of assets and operations will improve accessibility and expand their use.
	1.1.7 Encourage a Tree Inventory of all Urban Forestry in Alabama.*	Wind	Department of Forestry	Near-Term	Staff Time	Better asset information will improve understanding for decisions to protect lives and property.
Improve the statewide availability of risk information, particularly in GIS format	1.2.1 Adopt a common Geographical Information System (GIS) data system throughout State, county and local government.	All	AEMA	Near-Term	TBD	Better risk information will improve understanding for decisions to protect lives and property.
Reduce the impact of hazard events (i.e., loss of service) for state departmental functions	1.3.1 Update contact information in the Departmental Emergency Operation SOP on a regular basis and review and update biannually.	All	AEMA All State Agencies	Near-Term	Staff Time	Improved and up-to-date information in the SOP will improve mitigation and other planning designed to reduce the impact of hazard events.

**Table 6.8-10
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.3.2 Develop and maintain a Continuity of Operations plan for the ADEM including periodic review and updates.	All	All State Agencies	Near-Term	Staff Time	Keeping state departmental functions operational during and following hazard events is important to serving clients.
Enhance flood mitigation efforts	1.4.2 Increase community awareness about the need and process for requesting floodplain mapping.	Flood	ADECA (OWR)	Near-Term	Staff Time and Outreach Materials	Lack of information on flood vulnerability can inhibit effective flood protection measures.
	1.4.3 Request funding from FEMA to update state floodplain maps.	Flood	ADCNR	Near-Term	Staff Time	Lack of information on flood vulnerability can inhibit effective flood protection measures.
	1.4.4 Evaluate community flood studies and FIRMS for accuracy.	Flood	OWR	Near-Term	Staff Time	Understanding vulnerability will help to frame discussions by decision makers on how to preserve and protect assets from hazard events.
	1.4.7 Encourage each community to include critical facilities such as hospitals, nursing homes, schools, police stations, fire stations and emergency operations centers indicated on each floodplain map.	Flood	OWR	Near-Term	Staff Time	Lack of maps that include critical facilities can inhibit effective flood protection of these structures.
	1.4.8 Coordinate activities between the state and local or regional water management authorities.	Flood	OWR	Near-Term	Staff Time	Effective coordination between water management agencies will reduce the risk from future flooding.

**Table 6.8-10
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.4.15 Reduce the flooding risk to communities by acquiring property located in the 100-year floodplain and return it to open space.	Flood	AEMA OWR Local Government	Near-Term	Construction costs to be determined by project specifics. (historically >\$1 million)	Open space will significantly reduce the flooding risk to communities.
Enhance hurricane mitigation efforts	1.5.1 Review coastal NFIP maps for potential updates.	Flood	OWR Local Government	Near-Term	Staff Time	Understanding vulnerability will help to frame discussions by decision makers on how to preserve and protect assets from hazard events.
	1.5.2 Update the COHIS project on an annual basis.	Flood	ADCNR ADEM SARPC Local Government	Near-Term	Staff Time	This update will provide up-to-date information on existing Gulf-fronting structures and will provide a tool for local governments during hurricane recovery efforts.
Enhance earthquake mitigation efforts	1.6.1 Maintain membership and participation in the Central United States Earthquake Consortium.	Earthquake	AEMA GSA	Near-Term	Approximately \$500	Keeping state departmental functions operational during and following hazard events is important to protecting lives and property.

* New in 2007

**Table 6.8-11
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce the threat of injury and loss of life from natural hazards	2.1.2 Ensure all states codes and standards ensure the protection of life.	All	BLDG. CODE COMMISSION	Near-Term	Staff Time	Expanding hazard mitigation initiatives will improve the State's resistance to hazards for the future.
	2.1.5 Maintain tornado safe room initiatives statewide.	Wind	AEMA NOAA Local Government	Near-Term	Staff Time	Continues efforts to reduce tornado risk to citizens Statewide. Tornadoes are identified as one of three most significant hazards in the State.
	2.1.12 Establish a sustainable hurricane shelter strategy to provide protection for citizens of the coastal communities.	Wind	AEMA AEC Local EMA	Near-Term	Staff Time	Identifying a sustainable shelter strategy will provide protection for many people.
	2.1.13 Encourage the integration of Tree Emergency Plans into the risk assessment portion of all local mitigation plans.*	Wind	Department of Forestry	Near-Term	Staff Time	Increasing accessibility to new information/data such as Tree Emergency Plans strengthens mitigation planning as trees are a major source of damage during wind events.
Reduce natural hazard impact on individual properties, businesses and public facilities	2.2.2 Identify and prioritize utility ROWs for tree and brush removal.	All	ALDOT	Near-Term	Staff Time	Increasing accessibility to critical power lines will increase the opportunity of repair crews to restore power following a hazard event.
	2.2.4 Encourage applicable local governments (insert county names) to retrofit critical facilities so that they will sustain natural disasters.	Wind	AL Insurance Department	Near-Term	Staff Time and Production costs	Improving the structural integrity of vulnerable homes and securing contents will improve the safety of households that might not be able to afford repairs.

**Table 6.8-11
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	2.2.5 Advance provision for electrical generators through FEMA grant programs.	All	AEMA	Near-Term	Staff Time	Reduces loss of function to critical facilities and operations following natural hazards.
	2.2.6 Advance provision for electrical generators for state colleges and universities, including two year colleges through FEMA grant programs, as part of an initiative to develop and maintain all-hazard shelter capacity.	All	AEMA	Near-Term	Staff Time	Reduces loss of function to critical facilities and operations following natural hazards.
	2.2.10 Develop an inventory of the number of radio repeater sites and dispatch centers currently without backup electricity.	All	AFC	Near-Term	Staff Time	Backup communication will keep the AL Forestry Commission operational during a hazard event.
Reduce natural hazard impact on natural resources	2.3.6 Encourage the use of software such as ITREE to both manage and predict tree damage.*	Wind	Department of Forestry	Near-Term	Staff Time and Software costs	Promoting use of software will assist in risk identification.

* New in 2007

**Table 6.8-12
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the State's ability to protect new and future residential and commercial structural assets	3.1.5 Encourage state agencies to adopt a "No Adverse Impact" approach to their development and to share development plans with communities.	All (Floods)	Local Government	Near-Term	Staff Time	Promoting plans and zoning ordinances that limit development in known hazard areas will reduce the probability that these structures will be affected by hazards.
Reduce the probability that new or future residential and commercial structural assets will be affected by hazards	3.2.3 Inform land and resource managers, including those engaged in planning and zoning, about potential hazards in their jurisdictions.	All	AEMA ADEM	Near-Term	Staff Time	Ensuring the continued involvement of stakeholders will increase the awareness of the impact of hazard events.

**Table 6.8-13
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Increase stakeholder awareness about the hazards identified in the state's hazard mitigation plan	5.1.1 Develop a public outreach and awareness campaign to educate stakeholders on the hazards identified in the state's hazard mitigation plan.	All	AEMA AARC Department of Forestry	Near-Term	Staff Time and production costs	Informing the public on hazards within Alabama prepares citizens to understand and undertake their own mitigation actions.
Increase stakeholder awareness about hazard mitigation preparedness and response	5.2.4 Increase the number of communities who participate in the Community Rating System program.	Floods	OWR	Near-Term	Staff Time	Increased CRS scores will result in lower insurance premiums for homeowners and will decrease the flood risk to the community.

**Table 6.8-13
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	5.2.8 Provide technical assistance (community assistance visits, contacts, workshops and/or publications) to local officials on proper implementation of the NFIP.	Floods	OWR	Near-Term	Staff Time	Well trained local officials in the NFIP will result in safer communities.

**Table 6.8-14
Mitigation Action Plan Near-Term Actions (0-2 Years) Goal 6
Establish Interagency Hazard Mitigation Cooperation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Integrate hazard mitigation into all state and local response / recovery activities	6.1.1 Facilitate the coordination of all state and federal emergency management activities.	All	AEMA FEMA	Near-Term	Staff Time	Coordination between emergency management activities will reduce the risk from hazards.
	6.1.2 Facilitate the coordination of state and local emergency management activities.	All	AEMA Local EMAs	Near-Term	Staff Time	Coordinating agencies will increase the community's resistance to hazards.
	6.1.4 Expand the use of the State Hazard Mitigation team by adding representatives from other state, regional and federal organizations.	All	AEMA	Near-Term	Staff Time	Promoting hazard mitigation will reduce the impact of hazard events on the state.
	6.1.5 Establish a schedule to update the SHMT on existing and upcoming hazard mitigation activities throughout the state.	All	AEMA	Near-Term	Staff Time	Promoting hazard mitigation will reduce the impact of hazard events on the state.

**Table 6.8-15
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve local and state capability to study natural hazards	1.1.1 Conduct an evaluation of the expanded NOAA Weather Radio program to determine the overall effectiveness of the system following the completion of the pilot project.	All	AEMA	Mid-Term	TBD	Expanding the NOAA Weather Radio program improves local and state capability to protect life and property.
	1.1.5 Update NOAA assessments of past events and damages.	All	NOAA AEMA	Mid-Term	Staff Time	This update will provide up-to-date information on past events and damages.
	1.1.6 Routinely collect, monitor, and evaluate selected climatic, water-supply and water-use data to identify at an early stage the onset of a drought or potential for drought, geographic extent of the affected area and changes in the drought levels.	Drought	ADECA (OWR)	Mid-Term	Staff Time	Obtaining comprehensive data pertaining to drought will improve local and state capabilities response to and mitigation measures against droughts.
Improve the statewide availability of risk information, particularly in GIS format	1.2.2 Maintain a GIS inventory of all critical facilities, large employers / public assembly areas and lifelines.	All	AGIC	Mid-Term	Staff Time	Better risk information will improve understanding for decisions to protect lives and property.
	1.2.3 Utilize GIS to evaluate the vulnerability of critical facilities, large employers / public assembly areas and lifelines by comparing them with hazard-prone areas.	All	AEMA AGIC	Mid-Term	Staff Time	Better risk information will improve understanding for decisions to protect lives and property.

**Table 6.8-15
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.2.4 Provide a prioritized list of the natural risks to all Departmental facilities and remote monitoring sites.	All	AEMA	Mid-Term	Staff Time	Better risk information will improve understanding for decisions to protect lives and property.
	1.2.5 Review local and county mitigation plans following disasters or serious hazard occurrences in order to evaluate risk assessments and mitigation priorities.	All	AEMA Local Government	Mid-Term	Staff Time	Reviewing local and county mitigation plans will increase the community's resistance to hazards.
Reduce the impact of hazard events (i.e., loss of service) for state departmental functions	1.3.3 Develop a plan to protect public records.	All	All State Agencies	Mid-Term	Staff Time	Protecting public records will ensure that this information is available for future uses.
	1.3.4 Develop a plan to protect data.	All	All State Agencies	Mid-Term	Staff Time	Protecting data will ensure that this information is available for future uses.
	1.3.5 Develop and maintain COG.	All	All State Agencies	Mid-Term	Staff Time	The planning process involved with the maintenance of continuity of government often reveals mitigation opportunities.
	1.3.6 Develop COOP for all hazards, including periodic review and update of developed plan.	All	All State Agencies	Mid-Term	Staff Time	The planning process involved with the maintenance of continuity of government often reveals mitigation opportunities.
Enhance flood mitigation efforts	1.4.1 Identify channel and ditches that must be improved to provide maximum drainage capacity.	Flood	AEMA ADECA ADCNR	Mid-Term	Staff Time	Supporting existing efforts to mitigate flood risk will reduce the impact of hazard events.

**Table 6.8-15
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.4.13 Establish a schedule to inspect, repair and maintain state and local community levees.	Flood	USACE Local Government	Mid-Term	Staff Time	Improving the structural integrity of existing levees will provide increased flood protection.
	1.4.14 Reduce the number of unsafe State dams.	Flood Dam	ADECA	Long-Term	Staff Time and Construction costs to be determined by project specifics.	Reducing the number of unsafe State dams will protect lives and property in the downstream floodplain.
	1.4.15 Reduce the flooding risk to communities by acquiring property located in the 100-year floodplain and return it to open space.	Flood	AEMA OWR Local Government	Near-Term	Construction costs to be determined by project specifics. (historically >\$1 million)	Open space will significantly reduce the flooding risk to communities.
Enhance hurricane mitigation efforts	1.5.1 Review coastal NFIP maps for potential updates.	Flood	OWR Local Government	Near-Term	Staff Time	Understanding vulnerability will help to frame discussions by decision makers on how to preserve and protect assets from hazard events.
	1.5.2 Update the COHIS project on an annual basis.	Flood	ADCNR ADEM SARPC Local Government	Near-Term	Staff Time	This update will provide up-to-date information on existing Gulf-fronting structures and will provide a tool for local governments during hurricane recovery efforts.

**Table 6.8-15
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Enhance earthquake mitigation efforts	1.6.1 Maintain membership and participation in the Central United States Earthquake Consortium.	Earthquake	AEMA GSA	Near-Term	Approximately \$500	Keeping state departmental functions operational during and following hazard events is important to protecting lives and property.
	1.6.2 Upgrade the State's monitoring capabilities for earthquakes.	Earthquake	AEMA GSA	Long-Term	Individual Project costs associated with Map Production and Seismic monitoring equipment	Resulting maps indicate areas of greatest risk. Such maps can lead to wiser use of land and substantial savings to the State and its citizens.
	1.6.3 Perform hazard mapping to delineate areas susceptible to liquefaction during earthquakes.	Earthquake	AEMA GSA	Mid-Term	Staff Time	Resulting maps indicate areas of greatest risk. Such maps can lead to wiser use of land and substantial savings to the State and its citizens.
	1.6.4 Perform research to understand that geologic conditions that cause earthquakes in Alabama.	Earthquake	GSA	Mid-Term	Staff Time	Will enable prediction of areas where earthquakes might originate.
	1.6.5 Identify areas within Alabama that are most susceptible to earthquakes.	Earthquake	GSA	Mid-Term	Staff Time	Close monitoring of smaller earthquakes may indicate areas likely to have larger earthquakes.
Enhance landslide mitigation efforts	1.7.1 Perform hazard mapping to delineate areas susceptible to landslides and earthquakes.	Landslides	AEMA GSA	Mid-Term	Staff Time for mapping	Resulting maps indicate areas of greatest risk. Such maps can lead to wiser use of land and substantial savings to the State and its citizens.

**Table 6.8-15
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.7.2 Establish and maintain a database on landslides in the state.	Landslides	AEMA GSA ALDOT	Mid-Term	Staff Time	Delineates areas and geologic formations susceptible to landslides and sinkholes and identifies areas of recent activity in populated areas. Information may be used to determine future land uses.
Enhance sinkhole mitigation efforts	1.8.1 Establish and maintain a database on sinkholes in the state.	Sinkholes	AEMA GSA ALDOT	Mid-Term	Staff Time	Delineates areas and geologic formations susceptible to landslides and sinkholes and identifies areas of recent activity in populated areas. Information may be used to determine future land uses.

* New in 2007

**Table 6.8-16
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce the threat of injury and loss of life from natural hazards	2.1.1 Implement Legislation Title 11-19-1 through 24.	All	ADECA AARC	Mid-Term	Staff Time	Land use management practices that address mitigation increase the probability that lives and property will be protected.

**Table 6.8-16
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	2.1.3 Ensure all structures in the state meet minimum standards for life safety.	All	AACC ALM	Mid-Term	Staff Time	Improving building inspections will increase the integrity of structures and protect occupants during hazard events.
	2.1.4 Establish regulations that address disclosure of natural hazard risk during real estate transactions.	All	ALM AACC	Mid-Term	Staff Time	Regulations that address disclosure of natural hazard risk increase the probability that lives and property will be protected by increasing the awareness of property buyers.
	2.1.8 Train emergency responders.	All	AEMA	Mid-Term	Staff Time	
	2.1.9 Promote, strengthen and coordinate emergency response plans.	All	AEMA ADEM	Mid-Term	Staff Time	Coordinating plans ensures that mitigation efforts are addressed.
	2.1.10 Provide volunteer service opportunities that provide direct support to first responders, disaster relief and community safety.	All	ARC	Mid-Term	Staff Time	Volunteers can provide a variety of services that will reduce the risk posed by natural hazards.
	2.1.11 Develop a comprehensive tornado warning system in coordination with local communities.	Wind	AEMA Local Government	Mid-Term	Staff Time and Project specific costs based on individual regulations.	Expanding the NOAA Weather Radio program improves local and state capability to protect life and property.

**Table 6.8-16
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce natural hazard impact on individual properties, businesses and public facilities	2.2.1 Increase state agency accessibility to critical power lines.	All	ALDOT	Mid-Term	Construction costs to be determined by project specifics.	Increasing accessibility to critical power lines will increase the opportunity of repair crews to restore power following a hazard event.
	2.2.7 Strengthen all state building codes and enforcement.	All	BC, AACC ALM Local Government	Mid-Term	Staff Time	Reduces vulnerability of buildings to hazards.
	2.2.8 Encourage homeowners to retrofit their homes for category F-0 to F-2 tornadoes by providing information materials (handouts, booklets and videos).	Wind	AEMA FEMA	Mid-Term	Staff Time and Material Production costs	A well informed general public will result in a safer and less hazard prone community.
	2.2.9 Encourage homeowners to retrofit their homes for category 1-3 hurricane winds.	Wind	AEMA FEMA	Mid-Term	Staff Time and Material Production costs	Retrofitting homes will protect lives and property from hurricane hazards.
	2.2.11 Ensure all radio repeater sites and dispatch centers have contingency plans in place for backup electricity in case of a natural hazard.	All	AFC	Mid-Term	Staff Time	An inventory of the resources at the AL without back-up electricity will increase access to and use of this information by decision-makers to reduce wildfire risk.
	2.2.12 Develop model ordinance for Gulf-fronting communities requiring additional setbacks for Gulf-fronting properties.	Floods	AEMA ADCNR SARPC Local Government	Mid-Term	Staff Time	Increased setbacks will reduce property damage from storm surge.

**Table 6.8-16
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce natural hazard impact on natural resources	2.3.1 Develop hazard mitigation policies to protect the environment.	All	ADCNR	Mid-Term	Staff Time	Promoting mitigation measures that have an environmental benefit increase the overall benefits of the mitigation action.
	2.3.2 Preserve and rehabilitate natural systems to serve natural hazard mitigation functions (i.e., floodplains, wetlands, watersheds and urban interface areas).	Floods	USDA ADCNR USACE AEMA OWR	Mid-Term	To be determined by project scope	Preserving and rehabilitating natural systems will result in the production of natural hazard mitigation.
	2.3.5 Encourage local floodplain managers to continue to account for and incorporate wetlands protection and mitigation sites into the planning process when preparing new studies for watercourses.	Floods	OWR AEMA	Mid-Term	Staff Time	Incorporating wetlands into the planning process will result in effective wetland management.

**Table 6.8-17
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the State's ability to protect new and future residential and commercial structural assets	3.1.3 Promote enforcement of applicable building codes in hazardous areas.	All	AACC Local Government	Mid-Term	Staff Time	Improving building inspections will improve the integrity of structures and protect occupants during hazard events.
	3.1.4 Ensure local building codes require the latest construction techniques and materials designed to reduce the effects of natural hazards on residential and commercial structures.	All	AACC ALM	Mid-Term	Staff Time	Improving building inspections will increase the integrity of structures and protect occupants during hazard events.
	3.1.6 Develop design criteria for marinas, piers and other coastal structures with respect to storm resistance.	Wind Floods	BC OWR Local Government	Mid-Term	Staff Time	Developing design criteria will reduce the probability that these structures will be affected by hazards.
	3.1.7 Review new development proposal prior to issuance of floodplain development permits.	Floods	NOAA Local Government Department of Forestry	Mid-Term	Staff Time	Reviewing development proposals will improve the integrity of structures and protect occupants during flooding events.
	3.1.8 Develop coastal community resiliency plans to react to stressors on the jurisdiction (i.e. natural hazards).*	All	NOAA Local Government Department of Forestry	Mid-Term	Staff Time and Project costs TBD by project scope.	The use of erosion control measures will protect farmland and watershed infrastructure from floods.
Reduce the probability that new or future residential and commercial structural assets will	3.2.1 Disseminate information about new development and build-out potential in hazard areas.	All	Local Government	Mid-Term	Staff Time and production cost	Increased accessibility will improve mitigation and other planning efforts designed to reduce the impact of hazard events.

**Table 6.8-17
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
be affected by hazards	3.2.2 Provide technical assistance to local governments in developing, adopting and implementing land use ordinances.	All	AARC Local Government	Mid-Term	Staff Time	Expanding hazard mitigation initiatives will improve the State's resistance to hazards for the future.
	3.2.7 Disseminate information about Section 106 of the NHP Act and its ramifications in a disaster.	All	AHC	Mid-Term	Staff Time and production cost	Information will improve decisions to protect cultural resources.
	3.2.9 Look at critical facilities to determine which can be brought to FEMA 361 retrofit which can support.	Wind	AEMA All Agencies	Mid-Term	Staff Time and Project costs TBD by project scope.	Retrofitting critical facilities mitigates/reduces future damages and helps ensure continuity of operations.

* New in 2007

**Table 6.8-18
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 4
Reduce Alabama's Vulnerability to Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the state's ability to prepare for a natural or man-made disaster	4.1.1 Provide funding and technical assistance to state agencies and local and tribal governments to prepare hazard mitigation plans.	All	AEMA FEMA	Mid-Term	Staff Time and Project costs TBD by Local/Tribal project scope.	Expanding the number of hazard mitigation initiatives will improve the State's resistance to hazards.
	4.1.2 Improve the state's capability to administer pre- and post-disaster mitigation programs.	All	AEMA	Mid-Term	Staff Time	Expanding the number of hazard mitigation initiatives will improve the State's resistance to hazards.

**Table 6.8-18
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 4
Reduce Alabama's Vulnerability to Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the state's ability to respond to a natural or man-made disaster	4.2.1 Initiate a system to test the ability of local emergency manager to activate the Emergency Alert System.	All	AEMA ADHS Local Government	Mid-Term	Staff Time	Expanding the number of hazard mitigation initiatives, to include reverse 911 systems, will increase the community's resistance to hazards.
	4.2.3 Develop and maintain a Continuity of Operations plan for the ADEM.	All	All State Agencies	Mid-Term	Staff Time	Keeping state departmental functions operational during and following hazard events is important to serving clients.
	4.2.4 Provide training for local officials in mitigation activities.	All	Local Government AEMA	Mid-Term	Staff Time	Better trained local officials will result in safer, better protected communities.

**Table 6.8-19
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Increase stakeholder awareness about the hazards identified in the state's hazard mitigation plan	5.1.2 As part of the public outreach plan, ensure the public and forest managers are informed about the importance of implementing Best Management Practices on forest land.	All	Department of Forestry OWR Local Government ADCNR	Mid-Term	Staff Time	Informing the public on the warning system will increase understanding of what to do when the warning system is used.
	5.1.3 Develop an earthquake, landslide and sinkhole education program for the state's Boards of Education to use in each school system.	Earthquakes Landslides Sinkholes	AEMA GSA	Mid-Term	Staff Time and production costs	Prepares citizens for an emergency. Avoids panic and saves lives.

**Table 6.8-19
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Increase stakeholder awareness about hazard mitigation preparedness and response	5.2.1 Develop a public outreach and awareness campaign to educate stakeholders about appropriate actions to take regarding disaster preparedness and response, public health issues, life supporting first aid and volunteer service.	All	ARC	Mid-Term	Staff Time and production costs	Instructing school children will improve local strategies to address hazard mitigation in the future.
	5.2.3 Increase the number of homeowners and renters, who live in flood prone areas to have flood insurance through NFIP.	Floods	OWR	Mid-Term	Staff Time and production costs for outreach	Purchase of flood insurance will increase the awareness of flood mitigation among homeowners.
	5.2.6 Educate local communities about how to improve the CRS classification of other cities and Indian communities within their jurisdictions.	Floods	OWR	Mid-Term	Staff Time and production costs	Increased CRS scores will result in lower insurance premiums for homeowners and will decrease the flood risk to the community.
	5.2.7 Conduct hazard mitigation education and awareness workshops for local government officials and the private sector.	All	AEMA Local Government	Mid-Term	Staff Time	Better trained local officials will result in safer, more hazard resistant communities.

**Table 6.8-20
Mitigation Action Plan Mid-Term Actions (3-6 Years) Goal 6
Establish Interagency Hazard Mitigation Cooperation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Integrate hazard mitigation into all state and local response / recovery activities	6.1.3 Ensure hazard mitigation programs are included in all state and local economic development and community planning.	All	AARC ALM ADECA AACC	Mid-Term	Staff Time	Incorporate hazard mitigation initiatives will increase the community's resistance to hazards
Long-term recovery following a disaster	6.2.1 Integrate mitigation projects into recovery process through Public Assistance, Individual Assistance and SBA programs.	All	AEMA	Mid-Term	Staff Time	Promote hazard mitigation inclusion and funding through other programs, including Public Assistance and SBA, so that more mitigation measures are implemented.
	6.2.2 Integrate mitigation projects through education of local community and Public Assistance applicants.	All	AEMA Local Government	Mid-Term	Staff Time	Promote hazard mitigation inclusion and funding through other programs, including Public Assistance and SBA, so that more mitigation measures are implemented.
	6.2.3 Encourage/ create teams of Arborists to assist in performing damage assessments and recommend mitigation projects.*	Wind	Department of Forestry	Mid-Term	Staff Time	Coordinating with specialists prior to a disaster will aid in the implementation of mitigation actions following a disaster.

* New in 2007

**Table 6.8-21
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Enhance flood mitigation efforts	1.4.5 Develop comprehensive regional shoreline erosion and hazard mitigation plan.	Flood	NWS	Long-Term	Staff Time	Understanding vulnerability will help to frame discussions by decision makers on how to preserve and protect assets from hazard events.
	1.4.6 Increase state and local agencies' ability to issue flood warnings. (Construct automated stream gauging stations with rainfall measurement devices equipped with telemetry systems that ca	Flood	OWR	Long-Term	TBD based on individual project costs and other specific information.	Better information on rainfall data will provide the NWS and state and local agencies with the necessary data to issue flood warnings and protect lives and property.
	1.4.9 Improve the state's channel carrying capacity.	Flood	OWR USACE	Long-Term	TBD based on individual project costs and other project specific information.	Improving channel carrying capacity will reduce the impact of flooding.
	1.4.10 Ensure local communities utilize flood control measures including the use of retention / detention basis and other storm water management practices to retard the flow of water and reduce downstream damage.	Flood	OWR USACE ADCNR Local Government	Long-Term	Staff Time	The use of flood control measures will provide protection to properties from floods.

**Table 6.8-21
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.4.11 Implement the use of erosion control measures to protect infrastructure from floods. (Reshape fields, reestablish terrace systems, stabilize active gullies and watercourses, removed sediment bars and debris in channels and stabilize channel banks.)	Flood	OWR ADCNR Local Government	Long-Term	Construction costs to be determined by project specifics.	The use of erosion control measures will protect farmland and watershed infrastructure from floods.
	1.4.12 Modernize and improve access to flood gates for levee systems.	Flood	OWR USACE	Long-Term	Construction costs to be determined by project specifics.	The modernization of flood control systems, such as flood gates for levee systems, will reduce the flooding hazard to lives and property.
	1.4.14 Reduce the number of unsafe State dams.	Flood Dam	ADECA	Long-Term	Staff Time and Construction costs to be determined by project specifics.	Reducing the number of unsafe State dams will protect lives and property in the downstream floodplain.
Enhance earthquake mitigation efforts	1.6.2 Upgrade the State's monitoring capabilities for earthquakes.	Earthquake	AEMA GSA	Long-Term	Individual Project costs associated with Map Production and Seismic monitoring equipment	Resulting maps indicate areas of greatest risk. Such maps can lead to wiser use of land and substantial savings to the State and its citizens.

**Table 6.8-21
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 1
Establish a Comprehensive Statewide Hazard Mitigation System**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
	1.6.6 Establish a system of 6 short-band seismic stations within the state.	Earthquake	AEMA GSA	Long-Term		Provides a system of 6 short-band seismic stations to monitor seismic activity within the State that may indicate areas at risk for larger quakes.

**Table 6.8-22
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce the threat of injury and loss of life from natural hazards	2.1.6 Expand the number of local governments that include hazard reduction planning into their land-use plans and development regulations.	All	AEMA Local Government	Long-Term	Staff Time	Coordinating plans ensures that mitigation efforts are addressed.
	2.1.7 Assist K-12 schools and state colleges and universities develop vulnerability assessments, mitigation plans and mitigation projects to improve safety in their most vulnerable buildings.	All	AEMA AARC Local Government	Long-Term	Staff Time and Project specific costs based on individual regulations.	Providing technical assistance to educational facilities encourages the use of mitigation and strengthens critical facilities.

**Table 6.8-22
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 2
Reduce Alabama's Risk from Natural Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Reduce natural hazard impact on individual properties, businesses and public facilities	2.2.3 Develop program to remove trees most likely to fall into utility ROWs and replace them with species that do not pose as great a threat to power lines.	All	ALDOT	Long-Term	Staff Time and costs for tree replacement (to be determined based on plan)	Increasing accessibility to critical power lines will increase the opportunity of repair crews to restore power following a hazard event.
Reduce natural hazard impact on natural resources	2.3.3 Adopt ordinances or land use regulations requiring developers to incorporate both natural hazard mitigation measures, as well as environmental protection and restoration activities into their construction goals.	All	Local Government	Long-Term	Staff Time	Promoting plans and zoning ordinances that limit development in known hazard areas will reduce the probability that these structures will be affected by hazards.
	2.3.4 Encourage local floodplain managers to evaluate the increased hazard posed by the encroachment of non-native plant species into floodways.	Floods	OWR AEMA	Long-Term	Staff Time	Informing local officials on invasive plant species will contribute to the effective management of wetlands.

**Table 6.8-23
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 3
Reduce Vulnerability of New and Future Development**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the State's ability to protect new and future residential and commercial structural assets	3.1.1 Direct urban growth towards less hazardous areas.	All	Local Government ALM	Long-Term	To be determined by project scope	Minimizing development in hazardous areas protects lives and property.
	3.1.2 Require the incorporation of natural hazard mitigation measures in all new public construction.	All	Bldg. C>C Local Government	Long-Term	To be determined by project scope	Incorporating natural hazard mitigation into new public construction reduces vulnerabilities and protects live and property.
Reduce the probability that new or future residential and commercial structural assets will be affected by hazards	3.2.4 Develop and incorporate a new standard in all state-wide building codes that require a standard system be incorporated into window design and protection for all new construction.	Wind	AACC ALM	Long-Term	Staff Time	Improving building inspections will increase the integrity of structures and protect occupants during hazard events.
	3.2.5 Encourage the retrofitting of existing buildings for window protection through tax incentives or insurance rate reduction.	Wind	USACE Local Government	Long-Term	Staff Time	Improving the structural integrity of vulnerable homes and securing contents will improve the safety of households that might not be able to afford repairs.
	3.2.6 Ensure that building inspectors are trained in the enforcement of the adopted codes.	All	AACC ALM ADCNR Local Government	Long-Term	Staff Time	Better-trained inspectors result in safer, better-protected neighborhoods.
	3.2.8 Encourage Retrofit.	Wind	AEMA Local Government	Long-Term	Staff Time	Retrofitting structures can mitigate future damage from wind events.

**Table 6.8-24
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 4
Reduce Alabama's Vulnerability to Hazards**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Improve the state's ability to prepare for a natural or man-made disaster	4.1.3 Establish security system within the Gordon Persons Building to ensure that critical functions are not interrupted due to terrorist activities.	All	ADHR	Long-Term	Project costs TBD by project scope.	Better-trained inspectors result in safer, better-protected neighborhoods.
	4.1.4 Improve safety of rural roads by developing a rural road paving and a road side ditching plan so that they remain accessible during post event.	All	ALDOT	Long-Term	Project costs TBD by project scope.	Improving rural roads will make them more accessible during hazard events and increase the probability that lives and property will be saved.
	4.1.5 Implement proper use of trees to reduce amount of damage and protect structures.	Wind	Department of Forestry	Long-Term	TBD - Cost of trees in critical areas	Proper use of indigenous trees can serve to mitigate damage to structures by shielding from wind. Additionally they are less likely to result in debris.
	4.1.6 Encourage the use of storm resistant trees to reduce both the wind hazards as well as the amount of debris.*	Wind	Department of Forestry	Long-Term	TBD - Cost of trees in critical areas	Proper use of indigenous trees can serve to mitigate damage to structures by shielding from wind. Additionally they are less likely to result in debris.
Improve the state's ability to respond to a natural or man-made disaster	4.2.2 Establish provisions to ensure that program designed for moving families from dependency to self-sufficiency continue after a natural or man-made disaster.	All	ADHR	Long-Term	Staff Time	Keeping state departmental functions operational during and following hazard events is important to serving the public.

* New in 2007

**Table 6.8-25
Mitigation Action Plan Long-Term Actions (7+ Years) Goal 5
Foster Public Support and Acceptance of Hazard Mitigation**

Objectives	Action	Hazard Addressed	Responsible Agency	Projected Timeline	Cost	How Action Contributes to Mitigation Strategy
Increase stakeholder awareness about hazard mitigation preparedness and response.	5.2.2 Develop an emergency preparedness and response plan about earthquakes, landslides and sinkholes for the state's Boards of Education to use in each school system.	Earthquakes Landslides Sinkholes	AEMA GSA	Long-Term	Staff Time and production costs TBD by scope for each school system	Prepares citizens for an emergency. Avoids panic and saves lives.

6.9 Identification of Funding Sources

Because the State plan addresses a broad spectrum of mitigation issues there is a need for a variety of funding sources. Funding often comes from an assortment of sources, including the Federal, State and local governments in addition to private funding opportunities.

As previously discussed, the large majority of funding used to implement activities in the mitigation strategy since approval of the initial plan has been obtained from FEMA's HMGP program. This funding has gone towards an array of planning and non-planning projects (see **Section 6.8**). The State has also been able to obtain limited amounts of PDM grant funding. Typically, either local locally appropriated funds or CDBG money has been used as the required local matching funds for mitigation projects.

6.9.1 Federal

Federal funding sources include funding programs available through FEMA, the USACE, HUD, the United States Department of Agriculture Natural Resources and Conservation (NRCS), and the National Oceanographic and Atmospheric Administration (NOAA). The following is a list of applicable Federal assistance programs.

Federal Emergency Management Agency (FEMA)

- *Hazard Mitigation Grant Program (HMGP)*

Program authorized under Section 404 of the Robert T. Stafford Act, providing grants to State and local governments involved in long term hazard mitigation planning and measures following a presidentially declared disaster. The Federal share of any project shall not exceed 75 percent of the total eligible program costs.

- 5 percent HMGP Initiative (existing source of funding) – Initiated by FEMA in 1996. This program/policy established that up to 5 percent of the total HMGP funds for open and future disaster declarations are made available for the state to use on hazard mitigation measures that are difficult to evaluate against traditional program cost-effectiveness criteria. Currently, all available 5 percent HMPG funds for the State of Alabama are being utilized to fund a statewide warning and communication project, resulting in enhanced warning, communication and response capabilities statewide.
- 7.5 percent Public Assistance Funding (existing source of funding) – Section 404 of the Robert T. Stafford Act was amended by the Hazard Mitigation and Relocation Assistance Act of 1993. Later, in 2003, as a result of the Consolidated Appropriations Resolution, the amount of available funding for mitigation projects became 7.5 percent of the public and individual assistance programs.
- 7 percent Planning Grants (existing source of funding) – For all Federal Disaster Declarations with open application periods on or after November 13, 1999, the Disaster Mitigation Act of 2000 authorizes Grantees to use up to 7 percent of HMGP funds available to develop State, local or Tribal government mitigation plans.

- *Pre-Disaster Mitigation Grants (PDM) (existing source of funding)*

Pre-Disaster Mitigation Grants focus primarily on planning and mitigation activities implemented prior to a disaster. All PDM applicants, if they have been identified through the NFIP as having a Special Flood Hazard Area, must participate in the NFIP, to be eligible for funding. Grants are available for two types of actions; mitigation planning and mitigation projects.

- *Disaster Resistant University Grants (existing source of funding)*

The Federal Register states “FEMA will provide PDM funds to assist universities, through State and local governments, to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to facilities, research assets, students and faculty.”

- *Flood Mitigation Assistance Program (FMA) (existing source of funding)*

The National Flood Mitigation Fund provides grants to local and state jurisdictions on a 75/25 cost share basis, for planning and implementation of mitigation projects. Examples of mitigation projects include acquisition, elevation, relocation, flood-proofing, and technical assistance. The enabling legislation specifically excludes large scale structural flood control projects from receiving this type of funding.

- *Severe Repetitive Loss (SRL) Grants (existing source of funding)*

This relatively new grant program, established by the Flood Insurance Reform Act (FIRA) of 2004, provides funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the NFIP. Flood mitigation can include flood-proofing of historical properties and relocation, elevation, acquisition, or reconstruction of eligible residential properties. In order for a property to be eligible, a certain minimum number of claims must be filed over a prescribed period or the amount of claims must exceed the value of the property. Funding for FY 2005 through 2009 has been set at \$40 million nationwide.

- *Repetitive Flood Claims (RFC) Grants (existing source of funding)*

Also established by FIRA, the RFC grant program provides funds for acquisition or relocation of repetitive flood loss residential properties that cannot meet the 25 percent match required under the Flood Mitigation Assistance program. Up to 100 percent funding is available for each property. Current funding levels are \$10 million nationally.

United States Army Corps of Engineers (USACE)

The USACE provides several Federal assistance programs applicable to hazard mitigation including:

- *General Investigation Studies (potential source of funding)*

These studies require local cost sharing of 50 percent. At the time of this writing, qualified projects can receive up to 75 percent federal funding.

- *Continuing Authorities (potential source of funding)*

This program allows the USACE to take action on water resource projects under a specific dollar amount. For these projects, a feasibility study would be performed. Local cost shares for these studies vary from 0 to 50 percent. Projects deemed cost-effective in which a federal interest is established could qualify for up to 75 percent federal funding. Specific Continuing Authorities programs applicable to hazard mitigation include:

- Section 204 – For dredging associated with authorized navigation projects, protects, restores and creates aquatic and/or wetland habitats.

Study costs include:

- Initial appraisal – 100 percent Federal Share
- Feasibility Study – 65 Federal Share / 35 Non-Federal Share

Project costs include:

- If less than 35 percent, all necessary lands and relocations required for construction provided by Non-Federal source and cash contribution.
- Non-Federal entity operates and maintains the project.

- Section 205 – General small flood drainage/control projects.

Study costs include:

- First \$100,000 – 100 percent Federal Share
- Any amount over \$100,000 – 50/50 Federal/Non-Federal Share

Project costs include:

- 35-50 percent of total project costs paid by Non-Federal – 5 percent in cash
- \$7,000,000 maximum Federal costs.
- Non-Federal entity operates and maintains the project.

- Section 206 – Aquatic Ecosystem restoration and protection projects, including design, planning and construction.

Study costs include:

- 65/35 Federal/Non-Federal Share

Project costs include:

- 35 percent of total project costs paid by Non-Federal
- \$5,000,000 maximum Federal costs.

- Non-Federal entity operates and maintains the project.
- Section 208 – Waterway clearing and snagging projects
 - Study costs include:
 - First \$40,000 – 100 percent Federal Share
 - Any amount over \$40,000 – 65 Federal Share / 35 Non-Federal Share
 - Project costs include:
 - 35 percent - 50 percent of total project costs paid by Non-Federal – 5 percent in cash
 - \$500,000 maximum Federal costs.
 - Non-Federal entity operates and maintains the project.
- Section 107 – Small river and harbor improvement projects
 - Study costs include:
 - First \$100,000 – 100 percent Federal Share
 - Any amount over \$100,000 – 50/50 Federal/Non-Federal Share
 - Project costs include:
 - 10 percent of general navigation costs during construction paid by Non-Federal
 - 10 percent of general navigation costs over a 30 year period paid by Non-Federal
 - \$4,000,000 maximum Federal costs.
- Section 14 – Emergency stream bank and shoreline protection
 - Study costs include:
 - First \$40,000 – 100 percent Federal Share
 - Any amount over \$40,000 – 65/35 Federal/Non-Federal Share
 - Project costs include:
 - 35 percent of total project costs paid by Non-Federal – 5 percent in cash
 - 65 percent of total project costs paid by Federal
 - \$1,000,000 maximum Federal costs.
 - Non-Federal entity operates and maintains the project.
- Section 1135 – Environment restoration projects where a USACE project contributed to the deprivation of the environment.
 - Study costs include:
 - 75/25 Federal/Non-Federal Share

Project costs include:

- 25 percent of total project costs paid by Non-Federal
 - \$5,000,000 maximum Federal costs.
 - Non-Federal entity operates and maintains the project.
- Floodplain Management Services – Education and planning services for flood hazards and floodplain management

Study costs include:

- 100 percent Cost Recovery from non-water resource agencies and private sector.
- 0 percent cost to State, regional, local governments and non-Federal public agencies.

Project costs include:

- Studies generally cost \$10,000 - \$25,000.
- Planning Assistance to State – Comprehensive Plan development relating to the development , utilization, and conservation of water and related land resources

Study costs include:

- 50/50 Federal/Non-Federal Share

Project costs include:

- Federal Share generally \$25,000-\$75,000.
- \$500,000 maximum annual Federal allotment per state/tribe.

- *Congressional Authorization (Major Civil Works Projects)* (potential source of funding)

Feasibility studies for major civil works projects undertaken by the USACE that indicate Federal interests (benefit/cost ratio greater than 1:1) may be funded through Congressional Authorization of the proposed program.

United States Department of Housing and Urban Development

HUD maintains several funding sources that can be used towards furthering mitigation including:

- *Community Development Block Grants (CDBG)* (existing source of funding)

This program allows for the distribution of grant money for the development of viable communities, principally for low and moderate income communities and neighborhoods. Community development can be accomplished through housing, suitable living environments and the expansion of economic opportunities. Activities that are eligible

for funding under State administered CDBG include, but are not limited to: acquisition of property for public purposes; construction of public facilities; and planning activities.

The Disaster Relief Initiative for Hurricane Katrina was a special Congressional appropriation through the CDBG to aid recovery efforts. An initial allocation of \$74 million was distributed to affected communities through the ADECA, and an additional \$21 million was added as a supplemental fund. This appropriation provided funds to aid disaster relief, long-term recovery efforts, and restoration of infrastructure in distressed areas of Alabama most affected by Hurricane Katrina.

- *Section 312 Loan Program (potential source of funding)*

This program provides funds for the rehabilitation of residential and non-residential properties, including flood repair and flood proofing.

- *Rental Rehabilitation Program (potential source of funding)*

Through this program, funds are made available for rehabilitation of rental properties including flood proofing and repair of flood damage.

United States Department of Agriculture – Natural Resource Conservation Service

- *Emergency Watershed Protection (potential source of funding)*

In watersheds damaged by severe natural events, this program provides assistance to reduce hazards to life and property. If funds are available, NRCS can provide 100 percent of the cost of exigency situations and 80 percent of the cost of non-exigency situations.

Office of Coastal Resource Management (OCRM) under the National Oceanic and Atmospheric Administration (NOAA)

- *The Coastal Zone Management Program (CZMP) (existing and potential sources of funding)*

This program is a partnership with states in which the federal government provides funding, technical assistance and oversight to ensure compliance with the Coastal Zone Management Act. Federal grants are provided on an equal cost-share basis with the State.

- *Section 303 (potential source of funding)*

This program focuses on the protection of natural resources that mitigate wind and flooding impacts including beaches, dunes, and barrier islands. Federal funding is available.

- *Section 305 (potential source of funding)*

States developing coastal programs are eligible to receive funding under this section of the Coastal Zone Management Program.

- *Section 306*

Funding is primarily provided through implementation grants to administer State programs, including staff salaries, equipment purchases, public education and outreach, enhancement of public access and the undertaking of projects that monitor and/or enhance elements of the regulatory program.

- *Section 309*

This section provides detailed objectives calling for states to prevent or significantly reduce threats in high hazard areas or manage development in other hazard areas. A portion of this section is the Coastal Zone Enhancement Program (CZEP).

- Coastal Zone Enhancement Program – This program allows states to compete for additional funding by creating enhancements to the existing State Coastal Zone Management Program in eight priority areas including coastal hazard mitigation, wetlands protection, and the control of cumulative and secondary impacts of development.

United States Economic Development Administration (EDA)

- *Public Work Grants (potential source of funding)*

These grants are given to public and private non-profit organizations as well as to Indian Tribes for the building or expansion of public facilities that are essential to industrial and commercial growth.

- *Technical Assistance Grants (potential source of funding)*

Funding is made available through these grants to communities and firms for economic feasibility studies of resource development in the establishment of jobs. The funding also provides on-sight support for innovative economic development techniques.

- *Planning Grants (potential source of funding)*

Funding available through planning grants help to pay for the expertise needed to plan, coordinate and implement comprehensive economic development programs.

- *University Center Program Grants (potential source of funding)*

These grants are awarded to colleges and universities to utilize available resources to provide technical assistance to clients and address the economic development problems and opportunities of their service area.

- *Revolving Loan Fund (RLF) Grants (potential source of funding)*

This funding is aimed at helping depressed areas overcome specific capital market gaps and to encourage greater private sector participation in economic development activities.

In concert with private leaders, RLF grantees make fixed asset and/or working capital loans to area businesses.

- *Economic Adjustment Program Grants (potential source of funding)*

Assist state and local governments in solving recent and anticipated severe adjustment problems, resulting in abrupt and serious job losses and to help areas implement strategies to reverse and halt long-term economic deterioration, i.e. natural disasters and military installation closures.

6.9.2 State and Local Funding

The State of Alabama currently funds three State agencies that are involved in hazard mitigation activities.

- *Alabama Emergency Management Agency (AEMA) (existing source of funding)*

AEMA receives state funds for efforts related to the administration and operations of the federal disaster funding programs at a state level, in addition to disaster response.

- *Alabama Department of Economic and Community Affairs (ADECA) (existing source of funding)*

The Office of Water Resources (OWR) currently administers the NFIP program and related CRS program for the State of Alabama. OWR receives funding from the State for the NFIP. Currently, the federal/local share split is 75 percent Federal / 25 percent State. The State of Alabama provides the 25 percent match through cash or in-kind contributions.

ADECA also administers the CDBG program. Funds from this program have been used as a local match for HMGP funds.

- *Alabama Department of Conservation and Natural Resources (ADCNR), Coastal Zone Management Program (CZMP) (existing source of funding)*

ADCNR receives funding from the State of Alabama for the administration and daily operations of the Coastal Zone Management Program.

Local municipalities (counties and incorporated cities) actively participate in funding hazard mitigation projects. Local counties and cities provide local match funding for Federal programs to fund hazard mitigation activities. For example, local municipalities provide the local match share for FEMA HMGP and PDM grants as well as for USACE Section 205 and 206 grants. In addition, Jefferson County has established a local mitigation funding program for flood mitigation annually allocating monies to fund projects such as mitigation buyouts. The actual annual appropriation is established from year-to-year depending on budgetary demands and available resources.