

This section demonstrates the extent to which this plan is integrated with other State and regional programs as well as with FEMA programs and initiatives. It describes current mitigation program management capabilities and discusses how mitigation efforts can be better integrated via legislative, policy, institutional, substantive, functional, and financial perspectives. Included is an analysis of mitigation actions and effective use of funds, a system and strategy for monitoring the effectiveness of mitigation efforts and updating the SHMP in the future. It also addresses FEMA criteria for qualifying the 2010 plan as an enhanced plan.

## 8.1 INTEGRATION WITH OTHER PLANNING INITIATIVES

The requirements for the enhanced plan, as stipulated in the DMA 2000, and its implementing regulations, are described below.

### DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS

#### Integration with Other Planning Initiatives

Requirement §201.5(b)(1): [An Enhanced Plan must demonstrate] that the plan is integrated to the extent practicable with other State and/or regional planning initiatives (comprehensive, growth management, economic development, capital improvement, land development, and/or emergency management plans) and FEMA mitigation programs and initiatives that provide guidance to State and regional agencies.

#### Element

Does the **new or updated** Enhanced Plan demonstrate how it is integrated to the extent practicable with other State and regional planning initiatives (comprehensive, growth management, economic development, capital improvement, land development, and/or emergency management plans)?

Does the **new or updated** Enhanced Plan demonstrate how it has been integrated to the extent practicable with FEMA mitigation programs and initiatives that provide guidance to State and regional agencies?

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

### 8.1.1 Integration with other planning initiatives

Sections 2.1.2 and 2.1.3 of the 2010 SHMP provide a legal, institutional, and policy framework that allows the State to readily integrate advances in hazard mitigation practice in Nevada and provide a framework for the local and tribal communities to do the same. Tables 2-1 and 2-2 of Section 2 identify emergency management and hazard mitigation responsibilities of over thirteen different state agencies, one tribal agency and two local agencies who are involved in the Nevada Hazard Mitigation Planning Committee. Table 2-6 in Section 2.3.1 provides a detailed listing of the integration of the State plan with more than 15 other major state hazard planning efforts, most of which bear on the highest ranked natural hazards in the State – earthquake, flood, and wildfire.

Through the efforts of the NHMPC members, other stakeholders are, at minimum, made aware of the state hazard mitigation planning process and vice versa, members are bringing to the table the policies and plans developed by other entities outside of state government. One example of this is the participation of NHMPC members in the Nevada Earthquake Safety

Council which in turn works closely with the Western States Seismic Policy Council. Their policies are discussed at length at the NESC meetings and presented at the NHMPC meetings for consideration at the state level through common membership. These policies provide guidance in the earthquake mitigation strategy for the state. A sample of these policies can be found in Appendix O.

A second example is the participation of the Nevada Division of Forestry (NDF) on the NHMPC. NDF staff provides assistance in the development of local and tribal hazard mitigation and contribute to the State plan in the areas of risk assessment, history, and development of goals and objectives for wildfire hazard. NDF also works closely with federal agencies who manage much of Nevada's lands when planning wildfire mitigation strategies. The wildfire strategies found in the state plan are based on the regional 10-Year Comprehensive Strategy Implementation Plan developed by the Western States Governor's Association which can be found at the following website, [http://www.westgov.org/wga/initiatives/fire/implem\\_plan.pdf](http://www.westgov.org/wga/initiatives/fire/implem_plan.pdf).

Local planning efforts, such as that of the Truckee River Flood Project's Living River Plan which can be found at [http://truckeeflood.us/55/living\\_river\\_plan.html](http://truckeeflood.us/55/living_river_plan.html) are integrated into the Washoe County's Regional Hazard Mitigation plan. Both plans address the activities to mitigate flooding in all communities found along the Truckee River and the County's plan is integrated into the state plan.

### 8.1.2 Integration with FEMA programs

Table 2-7, page 2-17, lists FEMA mitigation programs and initiatives, the pertinent hazards, and a brief statement of the mechanism for integration of the Nevada State plan and local plans with the FEMA program. This is mainly documented by parallel goals and objectives as outlined earlier in Table 4-2. A detailed listing of which goals, objectives, and strategic actions are specific to which FEMA programs would have to be referred to the next iteration of the State plan, due to time constraints. Additional efforts to integrate hazard mitigation planning with different planning mechanisms at the local level is demonstrated by NHMPC holding its meetings in rural communities and bringing awareness of risks and activities that enhance the resiliency of each individual community visited. It is also notable that the NHMPC membership includes a representative whose responsibility is implementing one or more of the FEMA mitigation programs. As the Subcommittee expands to include more stakeholders in the process of updating the state plan, so grows its integration with other planning mechanisms and the FEMA mitigation programs. These stakeholders in turn bring to the planning process their vast network of working relationships with other local, tribal, state and federal agencies that promote integration of mitigation plans and FEMA's programs. During this update process the Subcommittee had new representatives from the tribes and the University of Nevada Cooperative Extension. The resulting plan is used as a guide by other agencies and communities in Nevada in the development of their mitigation strategies. The Nevada Bureau of Mines and Geology is assisting in the development of a web-based, all-hazard risk assessment guide that will greatly enhance this aid to the counties and other entities.

Table 4-3 in Section 4.2.1 presents the state's capability to mitigate the hazards described in Section 3 and demonstrates pre-and post-disaster hazard management policies, programs, and capabilities. It also presents the state's funding capabilities for hazard mitigation projects - whether it can support, facilitate, or fund such projects. Support implies that the state manages federally-funded programs. The state may also facilitate mitigation programs by providing technical assistance to local, tribal, and other entities. The last column provides details of each listed program or agency and its policies and capabilities to mitigate hazards in the state. Even a brief perusal of this chart will reveal that there are dozens of available programs, mostly at the federal level, which the State of Nevada and locals are eligible to apply for to support and facilitate hazard mitigation projects for all types of hazards in the state.

## 8.2 PROJECT IMPLEMENTATION CAPABILITY

### DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS

#### Project Implementation capability

Requirement §201.5(b)(2)(i): [An Enhanced Plan must document] the State's project implementation capability, identifying and demonstrating the ability to implement the plan, including:

- established eligibility criteria for multi-hazard mitigation measures.
- A system to determine the cost effectiveness of mitigation measures, consistent with OMB Circular A-94, guidelines and Discount Rates for Benefit-Cost analysis of Federal Programs, and
- [A system] to rank the measures according to the State's eligibility criteria..

#### Element

Does the **new or updated** Enhanced Plan demonstrate that the State has established eligibility criteria for multi-hazard mitigation measures? **Does the updated Plan describe changes, if any, to those criteria?**

Does the **new or updated** Enhanced Plan describe the State's system for determining the cost effectiveness of mitigation measures, consistent with OMB circular A-94? **Does the updated Plan describe changes, if any, to this system?**

Does the **new or updated** Enhanced Plan describe the State's system to rank the measures according to the State's eligibility criteria, **including a process to prioritize projects between jurisdictions and between proposals that address different or multiple hazards?**

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

Of the five programs in the Unified Hazard Mitigation Assistance, DEM administers the two following federal hazard mitigation grant programs, each of which are addressed in this section:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation Grants (PDM)

The NV Division of Water Resources (DWR) administers the remaining three programs based on the National Flood Insurance Program.

- Flood Mitigation Assistance Grants (FMA)

- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)

Each of these programs requires applications for proposed activities (usually planning and project activities) and is reviewed for the following:

1. Consistency with federal and state eligibility criteria (Section 5.3, page 5-11)
2. Consistency with state mitigation priorities (table 4-10, page 4-38)
3. Rank based on state ranking criteria (Section 5.3.1.1, page 5-11 and Figure 8-2 below)

**8.2.1 Establishing eligibility criteria for multi-hazard mitigation measures**

Before forwarding applications to FEMA, DEM, DWR and NHMPC review proposed activities to ensure consistency with federal and state criteria. DEM documents the review and keeps a record of it. Figure 8-1 is an excerpt from the currently approved HMA Administrative Plan showing the eligibility criteria used by both DEM and DWR in reviewing applications for funding of mitigation activities under the HMA programs.

The first step in the eligibility review is done when the Notice of Intent (NOI) is submitted by the possible subapplicant. The SHMO and the Floodplain Manager jointly review these notices against the current guidelines and the eligibility criteria found in Figure 8-1 to ensure that both the subapplicant and the proposed project are eligible. A formal notification about the eligibility of each NOI is forwarded to each submitting entity stating the eligibility of the proposed activity. This is done prior to the NHMPC review to ensure that eligibility criteria are met prior to the subapplicant's investment of time in the benefit cost analysis and completion of the remaining required documentation such as commitment letters.

Next, the applications are reviewed by the NHMPC to provide feedback to eligible subapplicant and to ensure the application is feasible, cost effective and is a long-term solution to the risk. Any recommended revisions are formally presented to the subapplicant to revise. The subapplicants have several weeks to make the recommended revisions and enhance the application prior to a final review by the SHMO, Floodplain Manager (FM), and Mitigation Specialist who work with the subapplicant in making revisions to comply with the recommendations made by the NHMPC members.

Next, applications are prioritized by NHMPC using a numerical scoring process for clarity, consistency, and accuracy. This is done at open meetings where the scores from each NHMPC member are tabulated, added and averaged with the highest scoring proposals rating higher in priority. Immediately after prioritization, the SHMO and/or FM notify all participating subapplicants of the prioritization results and submit all applications to FEMA.

For HMGP funding, applications are submitted to FEMA in order of the priority assigned with consideration to the amount allocated to the state. Applications may be submitted out of order to ensure the use of all funding allocated.

**Figure 8-1. Determining Eligibility for Hazard Mitigation Assistance Programs**

**DETERMINING ELIGIBILITY FOR HAZARD MITIGATION ASSISTANCE PROGRAMS**

1. **Applicant Eligibility:**

Only the state emergency management agencies or similar offices, or federally-recognized Indian tribal governments are eligible to apply to FEMA for assistance as Applicants under this program. Each state, territory, or tribal government shall designate

one Agency to serve as the Applicant for this program.

**Sub-applicant Eligibility:**

State-level agencies; Federally-recognized Indian tribal governments; local governments to include state-recognized Indian tribes, authorized Indian tribal organizations, and Alaska Native villages; public colleges and universities; and tribal colleges and universities are eligible to apply to the Applicant for assistance. Private non-profit (PNP) organizations and private colleges and universities are **not** eligible Sub-applicants; however, a relevant state agency or local government may apply to the Applicant for assistance on their behalf.

2. **Minimum Project Criteria.** To be eligible for the PDM grant program, a project must:
  - a. Be in conformance with the State Mitigation Plan and Local Mitigation Plan approved under 44 CFR part 201.
  - b. Be in conformance with 44 CFR Part 9. Floodplain Management and Protection of Wetlands, and 44 CFR part 10, Environmental Considerations.
  - c. Solve a problem independently or constitute a functional portion of a solution where there is assurance that the project as a whole will be completed. Projects that merely identify or analyze hazards or problems are not eligible;
  - d. Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. The grantee must demonstrate this by documenting the project;
  - e. Address a problem that has been repetitive, or a problem that poses a significant risk to public health and safety if left unsolved;
  - f. Will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur. Both costs and benefits will be computed on a net present value basis;
  - g. Has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options;
  - h. Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address;
  - i. Considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.
3. **Eligible Activities – Planning.**
  - a. Current guidelines will determine the eligible activities. Please see Attachment 1, for the current Pre-Disaster Mitigation Program Guidance.
4. **Eligible Activities – Projects.**
  - a. Current guidelines will determine the eligible activities. Please see Attachment 1, for

the current Pre-Disaster Mitigation Program Guidance.

5. **Initial Review.** The SHMO is responsible for ensuring each application contains the following items:
  - a. Completed appropriate Federal Assurances and Certification forms (FF-20-16 A, and/or B, and/or C and SF-LLL, found in Annex A, Appendix 5, also found in electronic format in the eGrants system).
  - b. Completed Federal and State Assurances (Annex A, Appendix 6).
  - c. *Applications for projects after November 1, 2004, require a reference to the specific recommendation contained in the State and/or Local Multi Hazard Mitigation (Section 322) Plan to which the proposed project relates;*
  - d. A completed application (see Attachment 2 for eGrants process);
  - e. Meet all applicable state and local permit requirements, and not contribute to or encourage development in the FLOODPLAIN or other areas at risk of hazards;
  - f. The Applicant Agency (DEM) will require that each Subgrantee provide a Certification Regarding Lobbying and Disclosure of Lobbying activities for themselves, their contractors and subcontractors (see Annex A, Appendix 5)
  - g. A complete, well documented Benefit Cost Analysis (BCA) demonstrating the project is cost effective and substantially reduces the risk of future damage, hardship, loss or suffering from a major disaster. The BCA must result in a minimum benefit ratio of one (1). The State **strongly recommends** the use of FEMA's Benefit Cost Analysis (BCA) software to meet this requirement. Please see Annex A, Appendix 7 for information on FEMA's BCA software;
  - h. If Subgrantee does not use FEMA's BCA software, the Subgrantee is responsible for providing similar information and backup documentation for the method used to determine the benefit to cost ratio of the requested project;

### 8.2.2 System to determine the cost effectiveness of mitigation measures

All proposed activities grants must be cost-effective as stated in criterion 5-h of the eligibility review, Figure 8-1 and 4-F of the ranking review in Figure 8-2 below. FEMA-funded proposed activities must meet the criteria described in OMB Circular A-94 Guidelines. DEM and DWR use the most current version of FEMA's Mitigation Benefit-Cost Analysis (BCA) Toolkit, presently found in the portal at [www.BCAhelpline.com](http://www.BCAhelpline.com) which incorporates the discount rate and present day value in the B/C ratio calculations. Grant sub-applicants perform the benefit-cost analysis for each project application. Currently DEM provides basic benefit-cost training to potential applicants as part of the application workshops, allowing the applicants to perform their own analysis and request assistance from the helpline for complex questions. Advanced BCA courses are offered by FEMA, although not regularly in Nevada. DEM makes an effort to notify

possible Nevada subgrantees about neighboring states venues where FEMA conducts such training.

### 8.2.3 System to rank the measures according to the state's eligibility criteria

A task force of the NHMPC developed the criteria described in Figure 8-2 in 2003 when the Pre-Disaster Mitigation competitive grant program was initiated. These criteria are now used to prioritize mitigation activities for all five HMA programs that are managed by two separate agencies. NHMPC members are very knowledgeable about Nevada's communities, their risks, vulnerabilities, capabilities, and mitigation strategies. Together the group has combined expertise in the identified and profiled highest-risk hazards for Nevada giving them the necessary professional background to address the proposals for all hazards and to allow competitiveness among a set of very diverse rural and urban communities.

**Figure 8-2 HMA Project Ranking Criteria**

#### **Review, Ranking, and Selection of Projects**

1. The NHMPC will be the review, ranking and selection panel for the HMGP, PDM, FMA, RFC and SRL grant program.
2. Each application will be reviewed for eligibility. It is the function of the NHMPC to review, prioritize and select projects for submission to FEMA for approval and funding.
3. Application Prioritization

Any application for mitigation funding must include all necessary data to allow the NDEM, NDWR and the NHMPC to evaluate the project in terms of the criteria listed below. Life safety issues shall be the primary consideration during evaluation of a project in criteria "a" through "d" below.

- A. Population Affected. Refers to the existing and /or estimated future population affected by the project considered. Impact includes reducing danger to people from the hazards.
- B. Assessed Land Value Impacted. Assessed land values for developed and undeveloped land affected by the project, including all structures (public, commercial, or residential) will be reviewed. Under this item, consideration will also be given to the impact on land values related to a reduction of the hazard.
- C. Public Perception of Need. The project will be evaluated in terms of satisfying the public's desire to see their money spent on "worthwhile" projects and the public's perception of the need.
- D. Emergency Access and Public Inconvenience. The project will be evaluated to determine its impact on the access of emergency vehicles including police, ambulance, and fire vehicles to their respective substation, hospital or station. The evaluation will include an assessment of the project's contribution to the accessibility to isolated residences, businesses, and public facilities created by the hazard.
- E. The benefit ratio of the BCA. The BCA includes Cost Avoidance and Annual Cost. Cost avoidance refers to projects which will reduce future costs, including potential damage. This item should also address other costs associated with lost opportunity and the risk associated

- by not implementing the project. Annual Cost Projects have a lower annual cost to maintain and/or continue the implementation of the project or will reduce future annual maintenance costs to property and structures benefiting from the project
- F. Availability of Other Funding Sources. This includes an evaluation of the potential for funds from other grants, and other public and private interests. This will also include the funding commitment of the project's sponsor for long term implementation, if applicable.
- G. Timing and Implementation. All aspects of timing and implementation should be considered under this item including, but not limited to, the ability to administer, begin, and complete a project in a reasonable time frame.
- H. Environmental Enhancement. Evaluation of this criterion includes benefits derived from improving or mitigating the threat to public health. It also includes, if applicable, information on the project's enhancement of habitat, recreational opportunities, and water quality.
4. If necessary to select from a range of projects due to funding or other constraints, the NHMPC will evaluate and prioritize all eligible applications. This ranking will be in accordance with the criteria in 44 CFR Section 206.
- a. Identification. For requests for funding of disaster declared after November 1, 2004, all funded projects must be consistent with the State Hazard Mitigation Plan. Flood Mitigation projects shall be identified and prioritized through the State, Indian tribal, and local planning process; additional selection criteria include
  - b. Measures that best fit within an overall plan for development and/or hazard mitigation in the community, disaster area, or State.
  - c. Measures that, if not taken will have a detrimental impact on the Subgrantee, such as potential loss of life, loss of essential services, damage to critical facilities, or economic hardship on the community.
  - d. Measures that have the greatest potential impact on reducing future disaster losses (Repetitive Loss Properties).
  - e. Measures designed to accomplish multiple objectives including damage reduction, environmental enhancement, and economic recovery.
  - f. In addition to the selection criteria noted above, consideration should be given to measures that are designed to accomplish multiple objectives including damage reductions, environmental enhancement, and economic recovery, when appropriate.
  - g. NHMPC will consider optimizing the total amount of funding available, including overmatching of Federal funds with non-Federal funds when developing this ranking.
  - h. NHMPC will also consider the level of interest and demonstrated degree of commitment of each Subgrantee.
5. The final decisions on projects to be submitted by the State to FEMA will be made by the NHMPC.

#### **Prioritization Evaluation**

Application Prioritization criteria Section I-3 "a" through "h" (weighted 40 percent) and the Additional Selection Criteria in Section I-4 "a" through "h" (weighted 60 percent) will be rated by the NHMPC on a scale of zero (0) through ten (10). NHMPC will use the total point values in Section K as a guide to the overall evaluation.

**Prioritization Form**

<b>Mitigation Grant Prioritization Form</b>	
<b>Subgrantee:</b> _____	
<b>Project:</b> _____	
<b>Planning, Review, Ranking and Selection of Projects:</b>	
<b>Application Prioritization (I-3)</b>	<b>Assigned Value (0 - 10)</b>
a. Population Affected	_____
b. Assessed Land Value Impacted	_____
c. Public Perception of Need	_____
d. Emergency Access and Public Inconvenience	_____
e. Benefit Ratio of BCA (Cost avoidance/Annual Cost)	_____
f. Availability of Other Funding Sources	_____
g. Timing and Implementation	_____
h. Environmental Enhancement	_____
Subtotal, Prioritization Criteria (I-3 "a" through "h") (divided by 2 for 40-point maximum)	_____
<b>Additional Selection Criteria (I-4 "a" through "h"):</b> (60-point maximum)	_____
<b>Total Value</b> (100-point maximum)	_____

Nevada is a small state and presidentially declared disasters tend to be sporadic and small in comparison to other states in Region IX. Thus applications for the HMGP program are not submitted in great numbers mostly due to the limited funding available. Only the highest priority of these are submitted for funding under HMGP. The remaining applications not forwarded to FEMA are subsequently enhanced by the subgrantees using the NHMPC recommendations, and are resubmitted for funding under the annual cycle programs with larger funding such as PDM.

Below is a list of presidential disaster declarations declared in Nevada for the last decade and the amount allocated for mitigation for each declared disaster.

Year	Type	Mitigation allocation
2008	Flood	\$475,538
2006	Flood	\$652,497
2005	Flood	\$533,519
2004	Wildfire	\$726,941

**8.3 PROGRAM MANAGEMENT CAPABILITY****DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS****Program Management Capability**

Requirement §201.5(b)(2)(iii A-D): [An Enhanced Plan must demonstrate] that the State has the capability to effectively manage the HMGP as well as other mitigation grant programs, [and provide] a record of the following:

- Meeting HMGP and other mitigation grant application timeframes and submitting complete, technically feasible, and eligible project applications with appropriate supporting documentation;
- Preparing and submitting accurate environmental reviews and benefit-cost analysis;
- Submitting complete and accurate quarterly progress and financial reports on time; and
- Completing HMGP and other mitigation grant projects within established performance periods, including financial reconciliation.

**Element**

Does the **new or updated** Enhanced Plan describe the State's capability to effectively manage the HMGP as well as other mitigation grant programs?

Does the **new or updated** Enhanced Plan provide a record for meeting HMGP and other mitigation grant application timeframes and submitting complete, technically feasible, and eligible project applications with appropriate supporting documentation?

Does the **new or updated** Enhanced Plan provide a record for submitting complete and accurate quarterly progress and financial reports on time?

Does the **new or updated** Enhanced Plan provide a record for completing HMGP and other mitigation grant projects within established performance periods, including financial reconciliation?

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

**8.3.1 Effective Management of HMGP and other Mitigation Programs**

DEM administers HMGP and PDM grants and DWR administers the three NFIP related grants, Although the HMA programs are managed by separate state agencies, both the SHMO and the FM work very closely to implement all applicable mitigation programs. Both agencies use the established application review process shown in Figure 8-3 to ensure timely and adequate implementation of the HMA programs.

The functions of the SHMO include the following:

1. Working with communities to develop appropriate grant applications for the HMGP and PDM programs;
2. Fiscal management of grants when received; and
3. Grant close-outs.

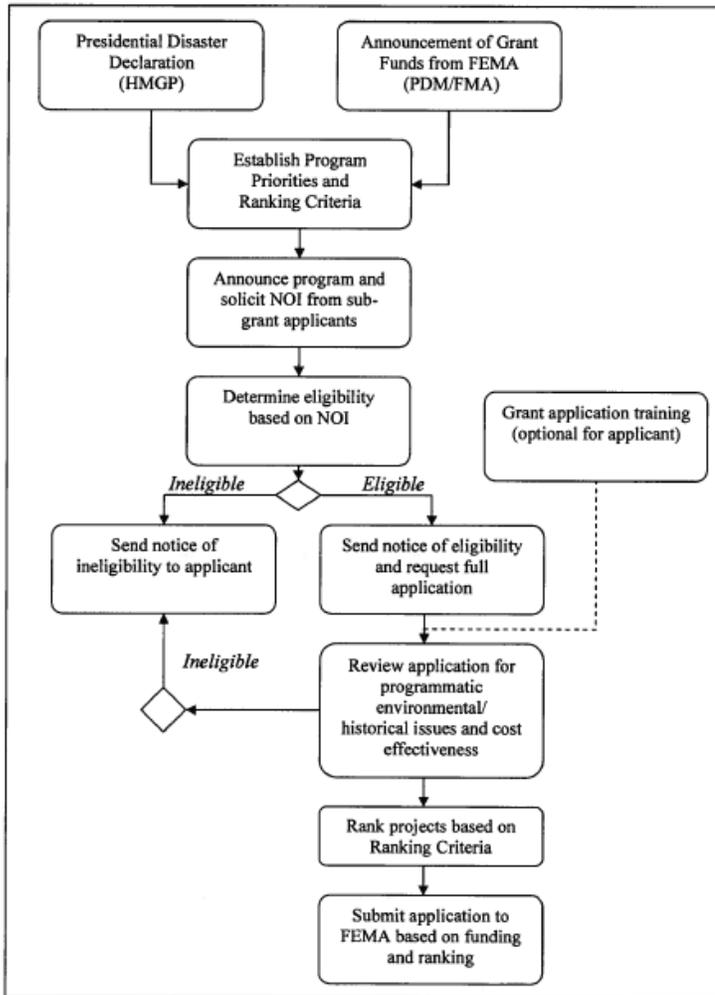
Based on the number of awards in the 2007-2009 period, DEM has a successful record of meeting mitigation grant application timeframes and submitting complete, technically feasible,

and eligible proposed activity applications with appropriate supporting documentation.

The SHMO increases the quality of applications by holding intensive application training workshops at least once per year. The training workshop covers specific grant programs, how to prepare an application, how to conduct a BCA, how to use the E-Grant system, and how to meet all basic requirements of each grant category.

Before each new grant cycle or award, the SHMO reviews scoring criteria and considers FEMA changes to grant requirements and criteria. The SHMO notifies the NHMPC and possible subapplicants quickly if any modifications affect the criteria or process. This ensures that DEM procedures are up-to-date and consistent with federal direction in hazard mitigation.

Figure 8-3: Mitigation Activities Review Process



During the 2007-2009 period, Nevada has successfully processed 24 hazard mitigation projects under HMGP and PDM programs. There have been no FMA projects as the State Floodplain Manager (FM) position was vacant from 2006 to 2008 and in 2009 the new FM began working with the SHMO to standardize the implementation process for all HMA programs. Given the limited available time of the State Hazard Mitigation Officer, all applications submitted were reviewed and the sub-applicants were provided feedback about proper documentation and the

environmental questionnaire. Nevada exceeded its funding minimum allocation of \$500,000 in the PDM program in 2009 and in selected projects for 2010. A listing of open, closed and pending awards is maintained by the SHMO in a spreadsheet format that tracks expiration date, quarterly reporting, closure and balances.

Program and financial reports are for each award and reviewed by mitigation staff for completeness, content and appropriate programmatic responses. Mitigation staff, SHMO or Mitigation Specialist, will record any discrepancy or concern found in this initial review in the appropriate file, request a technical assistance meeting with the subgrantee to discuss the issue and note any corrective actions in the report for reference. Follow up calls, emails and if necessary visits, are made to ensure the corrective actions are completed. Fiscal staff will accompany mitigation staff occasionally or depending on the corrective action.

Upon completion of the review the reports by mitigation staff, these are forwarded to fiscal staff who audits for consistency, accuracy and eligibility of expenditures. Fiscal staff process reimbursement of funding based on quarterly report audits. Fiscal staff also maintains grant reconciliation reports showing balances and expenditures per grant by calendar year. A declining balance reports for each HMGP and PDM award is maintained allowing for consistent tracking of balances. Mitigation staff uses these reports to manage the awards and to update NHMPC at its quarterly meetings. A sample of the Monthly Reconciliation report is shown below in Figure 8-4.

Figure 8-4 Sample Award Tracking Report

PRE-DISASTER MITIGATION FFY-7  
MANAGEMENT COSTS - PROJECT # 9701857  
MONTHLY RECONCILIATION

9701857															
GRANT AWARD					CLAIMS					Award	GRANT		REIMB. OF	INVOICES	Unreported Inv.
PLANNING	AWARD	Deobligated	Additional	TOTAL	1ST QTR.	2ND QTR.	3RD QTR.	4TH QTR.	5TH QTR.	TOTAL CLAIMS	Less Claims BALANCE	CLOSED	INVOICES	REPORTED	BALANCE
JURISDICTION															
DEM Mngt Costs	\$ 52,106.65			\$ 52,106.65						\$ -	\$ 52,106.65				\$ -
	\$ 52,106.65	\$ -	\$ -	\$ 52,106.65	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,106.65		\$ -	\$ -	\$ -

JOB # 9701857		PROOF	
		Fed AWARD	
		Less Subgrants	
		Unallocated	\$ -
		Local Balance	\$ 52,106.65
AWARD AMOUNT =			
		Less Claims:	\$ -
GRANT BALANCE:			
		Balance	\$ 52,106.65

RECONCILIATION OF EXPENDITURES VS CLAIMS		
08/02/09	DAWN 74.0 3878 Expenditures 8FY08:	-
08/02/09	DAWN 74.0 3874 Expenditures 8FY08:	-
08/31/10	DAWN 74.0 3878 Expenditures 8FY10:	-
08/31/10	DAWN 74.0 3874 Expenditures 8FY10:	-
08/03/10	DAWN 74.0 3878 Expenditures 8FY11:	-
08/03/10	DAWN 74.0 3874 Expenditures 8FY11:	-
	Outstanding:	-
TOTAL EXPENDITURES:		-
Less Total Claims:		-
DIFFERENCE:		-

Reconciled on 08/10/10 11:00 AM

The Department of Public Safety is currently in the process of reviewing software for its Divisions to manage federal grants. This software was successfully tested by the Division of Traffic Safety and DEM is considering its implementation for use with Homeland Security and Emergency Management funding sources. Mitigation staff is verifying its flexibility to accept GIS data that will allow for project mapping. If adopted, the new software may greatly enhance the efficiency of NDEM in tracking and managing federal grant details in the future. This includes tracking completed projects, losses avoided, goals attained, and actions completed.

**8.3.2 Environmental Review and Benefit-Cost Analysis**

The SHMO ensures that all applicants have provided all required environmental information and benefit-cost analysis information in the application, including required documentation for all data sources and thorough description of calculations and assumptions. The SHMO and FM rely on the staff of FEMA Region IX, to conduct environmental reviews for construction projects seeking

hazard mitigation grant funding from the HMA Programs. Before FEMA approval of a hazard mitigation grant, the project activities must comply with all applicable federal, state, and local codes and standards including the National Environmental Policy Act (PL 91-190, as amended) and all federal laws covered within the act, and for securing the necessary permits and approvals. Nevada does not provide funds to cover environmental reviews.

### 8.3.3 Quarterly Progress Report & Monitoring

The SHMO submits complete and accurate quarterly progress and financial reports on time. Quarterly reports based on measurable outcomes are generated by the sub-grantee and reported to DEM. DEM compiles the reports, assesses the programmatic and financial components, and sends the reports to FEMA. The reports include the following:

- Percent completion of the project
- Progress on milestones identified in the original schedule
- Overall assessment of the schedule
- Adherence to budget (including over- and under-reporting)

If subgrantees do not submit timely and accurate quarterly reports or the reports indicate problems associated with the above components, DEM will provide technical assistance and suggest corrective action. The SHMO requires the subgrantee to submit a plan for corrective action in writing. If the plan of action is not carried through, then payment processing is suspended.

The SHMO monitors the progress by reviewing the Quarterly Progress Report (see form in Figure 6-3, page 6-9) and may at any time contact the sub-applicant to review the project. Subgrantee quarterly reports are received electronically, filed and sent to FEMA Region IX staff. HMGP reporting is provided to FEMA via email and a hard copy via USPS. HMA reporting is done through the eGrants system.

The success of the reporting and monitoring process is documented by two mileposts:

1. We have successfully tracked the progress and money trail of each of each subgrantee's project through completion and closure.
2. Subgrantees generally adhered to budget; If anything some ran under budget.

One obstacle noted was that the great diversity in the type of projects presents a wide variety of issues to deal with, sometimes new one with each project; it is a constant learning process.

Despite these challenges, the monitoring and reporting process is working well to date, but NDEM understands the need to automate grant management to facilitate reporting, recordkeeping, and enhance service to subgrantees. Adopting a standardized grant-management software program will allow better tracking and assessment of the mitigation activities implemented statewide. If such a software program is implemented, it will require additional funding for maintenance and annual fees.

**8.3.4 Mitigation Activities Completion and Closeout**

The State of Nevada completes all mitigation grant activities within established performance periods, including financial reconciliation. The SHMO is responsible for HMGP and PDM closeout procedures. Since the first quarter of 2005, DEM has successfully disbursed and closed out (or is in the close-out process) approximately ten HMGP and PDM individual grants.

The Hazard Mitigation Grant Program (HMGP) closeout procedures are initiated when the subgrantee informs the SHMO that the project has been completed and all expenditures are reimbursed. As part of the closeout procedure, the subgrantee is required to submit a final Quarterly Financial Report and cost documentation. The Pre-Disaster Mitigation (PDM) grant closeout procedure is initiated when 1) the subgrantee informs DEM that the project is completed, or 2) the performance period for the grant will soon expire. As part of the closeout procedure, the subgrantee is required to submit a final Quarterly Financial Report and closeout documentation.

Nevada did not submit any applications for FMA during the update of this plan, however the program would be administered by the State Floodplain Manager and closeout procedures would be similar to those for HMGP or PDM. Nevada has no SRL properties and our goal is to keep that number at zero.

For each grant program, the SHMO ensures that quarterly reports and closeout documents are submitted on time. In addition, the SHMO conducts site inspections when a project is completed and before it is closed. NDEM currently has a dedicated auditor position that performs fiscal site visits of subgrantees.

If a project is not close to completion and its performance period is about to expire, first the specific details of the project are evaluated. The subgrantee is required to submit a plan of action for completion of the work on the project. Usually a request for time extension is sufficient to complete the project goals and objectives. In some cases the subgrantee's agency may provide additional matching funds necessary to complete work on a project. Other innovative approaches may be implemented depending upon the circumstances and the details of the specific project.

## 8.4 ASSESSMENT OF MITIGATION ACTIONS

### DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS

#### Assessment of Mitigation Actions

Requirement §201.5(b)(2)(iv): [The Enhanced Plan **must** document] the system and strategy by which the State will conduct an assessment of the completed mitigation actions and include a record of the effectiveness (actual cost avoidance) of each mitigation action.

#### Element

Does the **new or updated** Enhanced Plan describe the system and strategy by which the State will conduct an assessment of the completed mitigation actions?

Does the **new or updated** Enhanced Plan include the record of the effectiveness (i.e., actual cost avoidance) of each mitigation actions, **including how the assessment was completed?**

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

### 8.4.1 System and strategy for the assessment of completed mitigation actions

Since 2003, DEM has maintained a database that contains all HMGP and PDM project files, from initial funding through project completion. This is made up of over 38 projects, 18 of which have been added since 2007. The database provides information on the scope of the projects, local contacts and it also provides examples to other communities of mitigation activities that could be done in their areas.

The database is structured such that in the event of a disaster occurring in the State, the SHMO may check the database to determine if a mitigation project has been funded in the immediate vicinity of that disaster area. Existing project files include locations, project particulars, and local contact people. Local contact is made by the SHMO to request a field report on the effectiveness of the mitigation project, with local participants making a determination of cost-avoidance. This process should provide quality assessment information of the effectiveness of local mitigation projects from the local level. Also, when an event occurs, field-gathered information is used in developing a state emergency proclamation and in requesting a federal disaster declaration. To date, since the implementation of the database, there has not been a disaster occurrence that correlates to a mitigation project type (i.e. earthquake, flood or wildfire) within the affected area of a completed mitigation project to test the effectiveness of the project.

In February 2008 the City of Wells in rural northeast Nevada experienced a magnitude 6 earthquake. The NBMG compiled an initial report of estimated damages which will be published and posted on their website at [www.nbmq.unr.edu](http://www.nbmq.unr.edu). It is also compiling a comprehensive compendium of both scientific reports on the earthquake itself and reports on the damages, emergency response, and recovery from all parties affected by the earthquake. This includes transportation, utilities, local emergency responders, local government, and economic stakeholders. The SHMO will receive a copy of the report, damages, photographs and

mitigation projects accomplished by the community in an effort to record the data in the DEM mitigation database for future reference and performance of losses avoided. This was only a moderate-sized earthquake acting on a small town in a state that has a huge potential for earthquakes of this magnitude and greater affecting all communities in the state. It served almost the same purpose as a planned drill for other communities to learn from and plan earthquake mitigation activities accordingly.

#### 8.4.2 Effectiveness of mitigation actions (loss reduction)

DEM currently manages approximately 50 volunteers who participate in Preliminary Damage Assessment Teams (PDA), which assess damage after an incident. The PDA volunteers include individuals from the following agencies and professional groups:

- Nevada Division of Emergency Management
- Nevada State Public Works Board (SPWB)
- American Institute of Architects of Nevada (AIA)
- Nevada Division of Welfare
- North Lake Tahoe Fire Protection District (NLTFPD)
- United Healthcare (UA)
- Washoe County
- Nevada Department of Public Safety (DPS)
- Nevada Department of Information
- Nevada Division of Motor Vehicles (DMV)
- Nevada Department of Transportation (NDOT)
- Nevada Department of State Budget
- Nevada Division of Forestry (NDF)
- Nevada Public Utility Commission
- Nevada Department of Cultural Affairs
- Nevada Division of Water Resources
- University of Nevada, Reno

and other members of the private sector

A complete listing of current members is found in Appendix B. This wide range of professional expertise and backgrounds allows the PDA Teams to work efficiently to assess damage.

The PDA volunteers are coordinated by the Public Assistance Officer. Training and meetings of volunteers take place quarterly. Training sessions include the following:

Comment [e1]: I think this is more effective as a bulleted list

- ATC-20 Post Earthquake Safety Evaluation of Buildings,
- Earthquake hazard mitigation for hospitals
- Calculation of square footage,
- Acquiring latitude and longitude,
- Photographing of damages,
- Use of communication equipment,
- Proper safety procedures
- Media management.
- Incident Command System
- National Incident Management System
- Benefit cost analysis

The SHMO is coordinates with the Public Assistance Officer and FEMA to provide this group with formal training, which in turn allows these volunteers to assess damage, capture data, and prepare reports necessary to complete the studies for losses avoided on completed hazard mitigation projects.

The PDA teams participate in drills and training provided by emergency management personnel in the state. The table below highlights the major drills which required full activation of the PDA teams. The group is divided into teams of 3 to 5 members. Each team at minimum is assigned a team leader, public information officer, safety officer, and scribe. Assigned tasks vary with each drill to ensure that everyone is proficient in each and every task.

**Table 8-1: PDA Volunteer Training and Drill Schedule 2008-2010**

July 2008	VG 08 – Vigilant Guard Exercise – PDA Drill to establish damages after a seismic event in Northern NV.
Dec 2008	Training included hazard mitigation, history of PDA, presidential declarations & earthquake preparedness. PDA involvement in Vigilant Guard, Reno Rubble Exercise was reviewed.
Oct 2009	Training included data collection, cost codes and PDA forms.
Nov 2009	Incline Village Exercise, Deadly Hazard – Teams assessed damages of a public school building with the premise that a hazardous material contaminated the building and grounds. Provided a preliminary damage assessment to Washoe County.
July 2010	Virginia City Earthquake Drill. Assessed damage to 3 city streets with the assumption of a 6.7 magnitude earthquake. Included historical structure evaluation. Provided PDA to Storey County.

Nov 2010	FEMA preliminary damage assessment training –Carson City EOC
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The process requires trained members of the PDA volunteer program provide a professional assessment of completed mitigation projects and establish a record of the effectiveness (actual cost avoidance) of the mitigation actions. This approach provides statewide coverage to DEM and provides the support of trained personnel through partnerships with cooperating organizations.

PDA teams are activated when an event occurs and the affected local jurisdiction requests the assistance of the state in assessing damages. The assessment process consists of three phases: information gathering, site visit and damage assessment, and reporting of data to NDEM.

1. DEM staff will retrieve files on funded mitigation projects in the immediate area based on location coordinates required for all such projects. This information along with the appropriate PDA assessment forms for the type of event (earthquake, flood, wildfire) and a summary of the project background are provided to the PDA team.
2. After the information is provided to the team, the PDA team is sent to the disaster location(s) to contact appropriate local agencies and conduct assessments of previously funded mitigation projects with a primary focus on estimating loss avoidance. This process was used in the Wells earthquake by the NBMG staff and worked well in gathering information from local affected stakeholders (government, utilities, residents, businesses, etc.)
3. Once the physical site examination is completed, then a PDA report is compiled by the team and sent back to DEM where the SHMO will analyze it in terms of the project's BCA and other factors such as avoidance of injury, loss of life, or environmental degradation.

For example, if the funded project was a structural retrofit to a URM building and an earthquake occurs, then the loss avoidance would be calculated as the construction cost to rebuild the building along with any loss of life or injury of those working in the building at the time of the event.

Reports and studies from preliminary damage assessment of recent events in Nevada include the NBMG Wells earthquake report for which the final report is still in preparation, but preliminary findings were provided to the Nevada Earthquake Safety Council in May of 2010. NDEM also has compiled a report for Churchill County regarding potential well-water loss due to the in August of 2008 Fernley canal failure flood in Lyon County.

Reports by PDA teams to NDEM following disaster incidents are provided to the NHMPC for their use in prioritizing proposed projects. These reports will also form part of the vulnerability assessment for the community and the state plan update.

Nevada's long-term strategy is to create a risk reduction portfolio of all HMA type projects as well as to process activities (such as building code adoption and land use planning) to demonstrate risk reduction over time. These findings can be used in determining the most effective or the highest priority mitigation projects for the Nevada.

As mentioned before, to date, there has not been a disaster occurrence that correlates to a mitigation project type (i.e. earthquake, flood or wildfire) within the affected area of a completed mitigation project to test the effectiveness of the projects.

**8.5 EFFECTIVE USE OF AVAILABLE MITIGATION FUNDING****DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS****Effective Use of Available Mitigation Funding**

Requirement §201.5(b)(3): [The Enhanced Plan **must** demonstrate] that the State effectively uses existing mitigation programs to achieve its mitigation goals.

**Element**

**Does the new or updated Enhanced Plan document how the State has made full use of funding available from FEMA mitigation grant programs, and if the State has not made full use of this funding, does the plan explain the reasons why?**

Does the **new or updated** Enhanced document how the State is effectively using existing programs to achieve its mitigation goals?

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

**8.5.1 Effective use of available mitigation funding**

Nevada uses many funds and programs to mitigate against injury, loss of life, and damage to property. The primary mitigation programs of the state are the federally funded HMA programs which are administered by NDEM and NDWR.

Over the 2005-2010 period, 22 FEMA funded projects have been undertaken under the HMA programs in Nevada. The primary goal of the NHMPC is to ensure every community in Nevada developed a hazard mitigation plan. The NHMPC believes that the planning process is the first step in awareness of the risk and vulnerability posed by the hazards and provides the communities with a method to “do something about the risk”. This goal includes the updating of existing plans and enhancing the data available for locals to use in the update process. To date, every plan needing an update has acquired funding through the application process and, where needed, communities have joined together to develop regional plans. In 2010, funding received for planning will allow four counties to develop new plans and two to update their current plans. Also, the remaining three counties will be developing a regional plan for which the lead county will submit a proposal for PDM in 2011.

As a result, Nevada will have reached its goal of hazard mitigation plans for all communities by 2013.

Planning funds have been “shared” by more than one community in the past. For example, this year White Pine County is working with Eureka County, who provided the cash match for White Pine’s grant, which originally had a soft match. This allowed the hire of one consultant to develop a regional plan for the two neighboring counties with a single award. A similar process will be used by Churchill County and Mineral County. This cost-effective leveraging of grant monies to develop regional plans is a very functional way for rural communities to work together to become covered with a mitigation plan.

Nevada will use the plan maintenance process found in Section 6 to enhance its collection of data about locally funded mitigation projects to demonstrate the commitment of communities to the reduction of risk. Other funding sources such as the National Earthquake Hazard Prevention program have been used by the NBMG to enhance risk assessment tools and awareness of earthquake statewide, also need to be documented and presented in this plan. Private mitigation activities include the comprehensive seismic retrofit of churches in the City of Reno, and historic Virginia City. The Fire Safe Council, its local chapters spearheaded by homeowners, the University of Nevada Cooperative Extension, the Bureau of Land Management, the U.S. Forest Service, along with many state agencies work closely annually to coordinate a WUI Summit. The Summit's sole purpose is to provide homeowners and local government entities information about the wildfire mitigation activities, and possible sources for funding that can be done to protect life and property. The Summit takes place in September and is attended by as many as 200 people from rural, urban and "frontier" communities. There are numerous other flood improvement projects such as those completed by the Truckee River Flood Project and Clark County Flood Control District, the Carson River Water Subconservancy District and other special districts in Nevada that we know of but do not yet have full reports on that need to tell their story. In the next iteration we will attempt to more fully involve a greater number of these entities.

Many county-funded projects were completed. These investments in mitigation are located in the major disaster risk areas of Nevada according to the GIS modeling maps of local plans. FEMA mitigation funds allocated are closely linked to the state and applying community's plan goals. Prevention or significant reduction of loss of life and injuries is the state's primary goal.

The criteria used by DEM and NHMPC to solicit, select, and rank projects are clear and linked to maximizing project impacts that support the state plan goals. The DEM objective is to expend all funds in each grant program. DEM attempts to maximize local opportunities for receiving federal mitigation funding by establishing a project waiting list of HMGP applicants from previous HMGP and PDM rounds from which to identify, prioritize and submit potential mitigation projects.

#### **8.5.2 Nevada's effective use of existing programs to achieve mitigation goals**

A number of HMGP and PDM programs fund multi-hazard mitigation planning activities at the local or multi-jurisdictional level. In addition to the FEMA support funding shown in Table 8-2, Nevada communities augment mitigation funds with those provided through many other sources. Some of these local and private sources that partner with the state are listed in Tables 4-11, 4-12, and 4-13. Partnering with local and private groups in mitigation planning and projects promotes increased awareness and participation in mitigation activities on a local level. For example, the Truckee River Flood Project continues to purchase repetitive flood properties for demolition using funds derived from a local tax and the Clark County Flood Control District has installed major flood control facilities using funds derived from a locally imposed building fee. The Nevada State Public Works has structurally retrofitted historic buildings in the Carson City area to be earthquake-resistant using state general funds.

Table 8-2. 2005-2010 FEMA-Supported Grant Projects in Nevada

FEMA Grant Program	Selected*	\$ Obligated	\$ Expended	Number of Projects
FMA		0		0
HMGP	\$668,000	\$1,274,000	\$947,000	15
PDM	\$5,019,000	\$831,000	\$702,000	20
RFC	0	0	0	0

\*PDM = Selected for further review; HMGP = Under FEMA review

The information found on Table 8-2, regarding HMGP awards, includes 4 disaster declarations beginning in 2004. The HMGP difference between the obligated and expended funds is due to cost savings on 2 projects awarded in the 2004 and 2005 disasters. During these two disasters, awareness of the hazard mitigation program was limited and the state received only enough applications to cover the amount awarded by FEMA. Since 2005, increased awareness of the program built an inventory of mitigation on-the-shelf projects that are available for submission when events occur or funding sources become available allowing the state to utilize all awarded funds when cost-savings occur. The dollar difference between mitigation activities selected and obligated is due to the sluggish process of FEMA's National Environmental Policy Act compliance review. This is applicable to both PDM and HMGP selected activities. For PDM the difference between the obligated and expended funds is due to pending expenditures by the subgrantee for activities well within the performance period. All projects awarded have been completed.

FMA funding has not been used due to the restrictive nature of the program guidelines. Prior to 2010 many FMA proposals did not meet the 50 percent insured structures requirement when submitted, even though the mitigation activity supported the intent of the FMA program. However, this program is evolving and in the PDM 2010 grant cycle, Nevada will be applying for its first FMA grant. No proposals were submitted under the RFC (Repetitive Flood Claims) Programs due to the restrictions on the guidelines which could not be met.

Nevada's mitigation program has successfully accomplished the planning goal of developing hazard mitigation plans for all Nevada counties (all are at least in the planning process). The State has successfully developed relationships among agencies and brought awareness to communities about their risk and the State will continue to assist rural communities with mitigation plans to apply for funding to reduce risks. This will be addressed by continuing to hold NHMPC meetings in local communities which will both heighten awareness of hazard risks and encourage application for grant funding available to combat these risks.

**8.6 COMMITMENT TO A COMPREHENSIVE MITIGATION PROGRAM****DMA 2000 REQUIREMENTS: PLAN MAINTENANCE PROCESS****Commitment to a Comprehensive Mitigation Program**

Requirement §201.5(b)(4)(i-vi): [An Enhanced Plan **must** demonstrate] that the State is committed to a comprehensive state mitigation program, which might include any of the following:

- A commitment to support local mitigation planning by providing workshops and training, State planning grants, or coordinated capability development of local officials, including Emergency Management and Floodplain Management certifications.;
- A Statewide program of hazard mitigation through the development of legislative initiatives, mitigation councils, formation of public/private partnerships, and/or other executive actions that promote hazard mitigation;
- The State provides a portion of the non-Federal match for HMGP and/or other mitigation projects.
- To the extent allowed by State Law, the State requires or encourages local governments to use a current version of a nationally applicable model building code or standard that addresses natural hazards as a basis for design and construction of State sponsored mitigation projects.;
- A comprehensive, multi-year plan to mitigate the risks posed to the existing buildings that have been identified as necessary for post-disaster response and recovery operations.;
- A comprehensive description of how the State integrates mitigation into its post-disaster recovery operations.

**Element**

Does the **new or updated** Enhanced Plan demonstrate that the State is committed to a comprehensive State mitigation program?

**Does the updated Enhanced Plan demonstrate progress in implementing a comprehensive State mitigation program, including new mitigation initiatives developed or implemented by the State?**

*Source: FEMA, Enhanced State Hazard Mitigation Plan Review Crosswalk 2007*

**8.6.1 Commitment to Support Local Mitigation Planning**

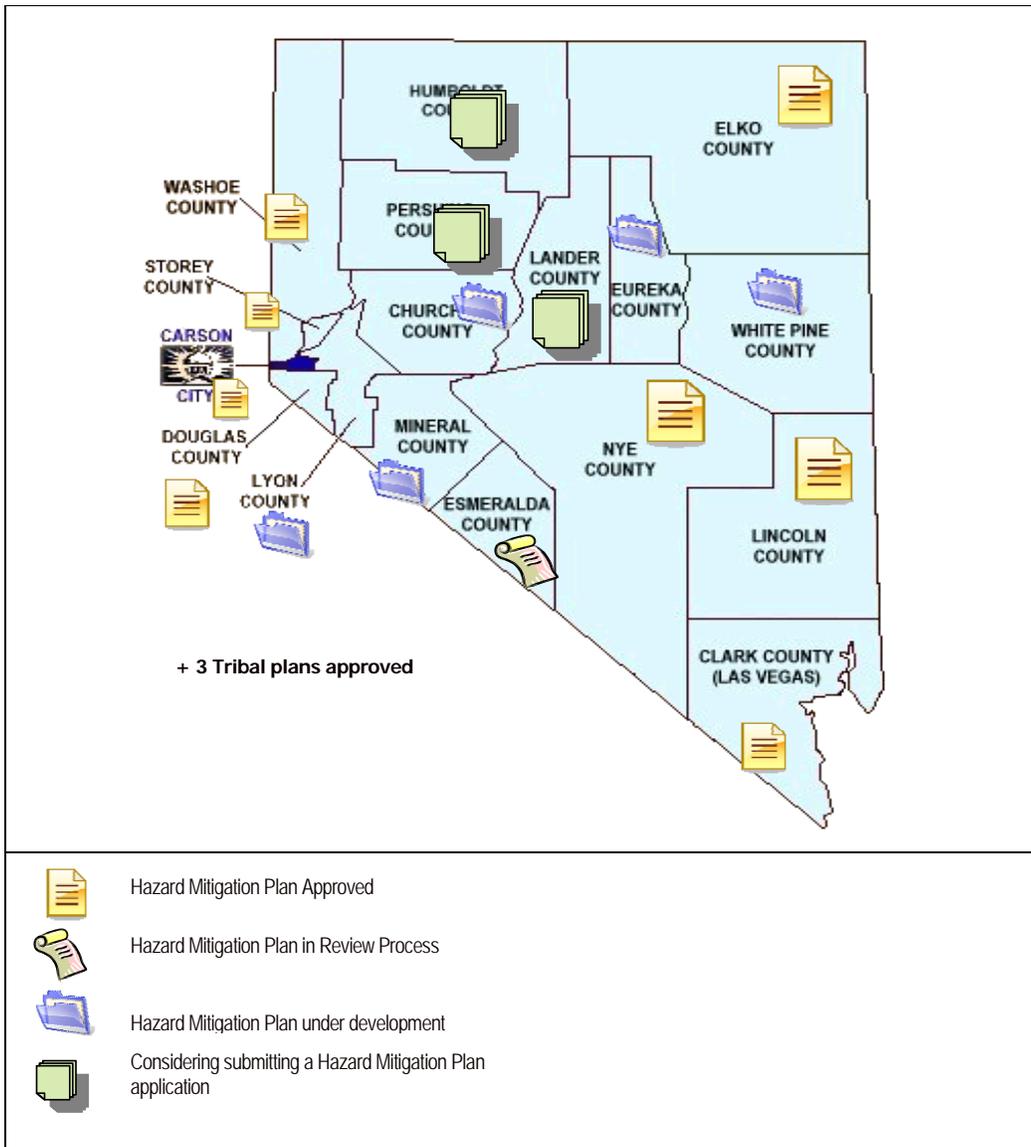
The SHMO works closely with the State Floodplain Manager (FM) to provide workshops, training, and technical assistance to the local emergency, tribal, and floodplain managers, government officials, firefighters, grant managers, and private sector consultants. The ultimate goal of these workshops is to assist each community in reaching its goal of having an approved LHMP. The current status of (LHMP) local hazard mitigation plans is shown in Figure 8-3.

- The FM sponsors 2 to 4 annual workshops for floodplain managers providing information on the NFIP National Flood Insurance Program. These workshops include education about the Community Rating System (CRS) which is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements by reducing their flood insurance premiums. Another workshop presentation is the Risk Map program, which increases public awareness and leads to action that reduces flood risk to life and property.

- Annually the FM and the SHMO jointly coordinate and present two grant application workshops for potential subgrantees to the HMA funding programs.
- SHMO sponsors two planning development workshops per year (one in northern and one in southern Nevada). A major goal of these workshops is to familiarize participants with the content requirements of a LHMP to qualify for FEMA approval.
- In addition, the FM provided a comprehensive week-long L273 workshop to Floodplain Manager statewide that covered building codes, elevations, insurance, FEMA policies, etc. This may be repeated on an as-needed basis.
- In addition, the Nevada Fire Safe Council (NVFSC) provides extensive training and workshops for local governments, homeowners and other stakeholders about wildfire mitigation activities. Please see additional details and schedules on the NVFSC website at <http://nvfsc.org/nvfsc/>
- The Nevada State Mapping Advisory Committee (SMAC) provides critical technical assistance to local, state and tribal entities. SMAC was established to advise the U.S. Geological Survey (USGS) on state priorities for map products and to inform map users about the status of mapping programs and the availability of map products. Membership in SMAC and its subcommittees is open to anyone interested in mapping in Nevada. Two subcommittees are currently active—one for geographic information systems (GIS) and one for geologic mapping. Participants include representatives of numerous local, state, and federal agencies, community colleges and universities, and the private sector. Additional data about SMAC is available at this website: <http://www.nbmj.unr.edu/smac/smac.htm>

NDEM and NDWR staff continue to maintain positive working relationships with local governments through phone, e-mail, conference calls, and meetings providing technical assistance, support, and information as needed.

Figure 8-5: Map of Counties and LHMP Status



**8.6.2 Statewide Programs Promoting Hazard Mitigation**

Sections 2, 3, 5 and Section 8.1.1 have already detailed many of Nevada's statewide hazard mitigation programs including legislative initiatives and executive actions that promote hazard mitigation. Some of the higher profile statewide programs dealing with Nevada's highest ranked hazards are summarized below:

- **Nevada Earthquake Safety Council (NESC)** is a statewide body representing a partnership of the public and private sectors that uses its professional expertise and community knowledge to make earthquake safety recommendations within the public and private sectors, and serve as the advisory body for State seismic safety policy. The current membership of NESC is listed in Appendix B. Their website includes policy statements, strategic plans, meeting minutes and annual reports, located at this link: <http://www.nbmq.unr.edu/nesc/>
- **Nevada Fire Safe Council (NVFSC)** – Utilizing the combined expertise, resources, and volunteer efforts of more than 5000 members in 125 chapters, the Nevada Fire Safe Council fulfills its mission to preserve natural and man-made resources throughout Nevada and the Lake Tahoe Basin by mobilizing all Nevadans to make their homes, neighborhoods and communities fire safe. The NFSC serves as a bridge between fire services, public agencies, and communities threatened by wildfire. The NFSC's strategies include educating citizens, promoting personal responsibility, identifying and rating fire risks and hazards, developing and prioritizing mitigation projects, and procuring funding to implement mitigation measures.

NVFC partners include the University of Nevada Cooperative Extension, the Bureau of Land Management, U. S. Forest Service, Nevada Division of Forestry, Nevada Association of Counties, local fire districts and homeowners. A complete listing of NVFSC partners is found in Appendix B. The NVFSC provides extensive training for local governments, homeowners and other stakeholders about wildfire mitigation activities. Please see additional detail found on its website at <http://nvfsc.org/nvfsc/>

Listed below are some statewide programs that involve partnering among State, local and/or private sector groups to achieve specific local mitigation planning efforts.

- NDEM partners with the Nevada Insurance Pool and NBMG through PDM grants to develop information such as HAZUS run data for earthquake and flood for each county. This data is distributed to local jurisdictions for their use in loss estimation and mitigation planning. Additionally, NDEM is working with UNR through an HMGP grant to provide county lists of geocoded URM building locations.
- FEMA is providing funds for Nevada to develop a "MyPlan" website to assist local planning professionals in the data collection necessary to address the risk and vulnerability assessment information required for hazard mitigation planning in their communities. The website is a new project that will be starting in 2010 and has many participating partners across state lines including California Emergency Management

Agency and NDEM and NBMG in Nevada, with NBMG acting as the lead in this project. The format will be standardized with California's and the website will provide local counties and tribes with information and mapping of local hazards.

This will allow local counties and Nevada a database that can be improved upon over time when additional data becomes available. It will be designed to allow local and tribal communities to overlay the hazards layers upon their built environment for a full risk assessment. Providing a more detailed risk assessment to local communities will improve their hazard mitigation planning efforts and allow a better project identification and prioritization process.

- Updating of the HAZUS database with current building inventory.
- Posting of NBMG Open File Reports with data from HAZUS about flooding on major rivers.
- Posting of NBMG Open File Reports with data from HAZUS about earthquake in over 37 of the rural communities in Nevada.
- The University of Nevada and NDEM are working in southern Nevada with the local building officials in an effort to develop microzonation of soils that will ultimately enhance the ability of the officials to develop and enforce building codes according to the soils found in the area. Funding for this purpose will be requested in the next PDM cycle to update this plan in three years. This proposal is part of a statewide soil microzonation project.

### **8.6.3 State Provision of a Portion of the Non-Federal Match for Mitigation Projects**

Although there is no provision for any portion of the State to provide a match for mitigation projects, there are other potential sources of State funding that may be used to match federal grants for specific projects. Some examples follow:

- State NRS 414, Emergency Management, provides the Disaster Relief Account and the Emergency Assistance Account which can be used by the state to match projects in qualifying communities for post-disaster costs.
- Additionally, NDOT has recently partnered with Douglas County to improve a culvert under Highway 395 to address flooding issues in Douglas County. NDOT is providing a portion of the non-federal match through road repair.
- State Public Works Board using an HMGP grant seismically retrofitted the Stewart Facility
- UNR continues to provide the match on planning activities such as HAZUS earthquake runs.

**8.6.4 Promotion of Nationally Applicable Model Building Codes.**

The State of Nevada has adopted a series of nationally applicable model building-related codes that local governments are encouraged to adopt. The existing State codes are shown in Table 8-3. Adoption of these codes by local jurisdictions will make local mitigation more effective. NHMPC takes into consideration the adoption of the State building codes when prioritizing proposals by the communities applying for hazard mitigation funding. NHMPC identifies those local governments with policies currently in place that include strong hazard mitigation programs and offers them as positive examples to other Nevada communities and local governments in developing their own effective hazard mitigation plans and ordinances. The State provides guidance to these communities, and supports pass-through funds available to communities interested in adopting hazard mitigation actions.

Policy	Description of Model Codes	Applicability
Building Codes	<p>The State has adopted a building code and local governments are encouraged to adopt and enforce this code.</p> <p><b>NRS 278.580</b> – Amend building codes to include seismic provision of the International Building Code.</p> <p><b>NRS 461.170</b> – Manufactured buildings required to use the various uniform codes.</p> <p><b>NRS 477</b> – Ability of the State Fire Marshall to recommend changes to building codes to ensure fire safety.</p> <p><b>NRS 514.040(3)</b> – Nevada Bureau of Mines and Geology to apply geologic engineering principles to construction, etc.</p> <p><b>NRS 623</b> – Architecture, Interior Design and Residential Design.</p>	<p>The adoption and enforcement of building codes relates the design and construction of structures to standards established for withstanding wildfires, earthquakes, flooding, dam failure, and high winds.</p>
Zoning	<p>Laws and ordinances regulate development by dividing the community into zones and by setting development criteria for each zone.</p> <p><b>NRS 278.160</b> – Planning and zoning.</p> <p><b>NRS 278.580</b>—Investigation of seismic hazards: fault, fissure, and liquefaction.</p> <p><b>NRS 410.095 through 410.210</b> –</p>	<p>Zoning can keep inappropriate development out of hazard-prone areas and can designate certain areas for such things as conservation, public use, or agriculture. Zoning can also be used to control construction by dedicating areas for cluster</p>

Policy	Description of Model Codes	Applicability
	Regulation and restriction of landfills, garbage dumps, and junkyards.	development or planned unit development. The State currently works with local governments on implementing these last two policies.
<b>Land Use Planning</b>	<p>Comprehensive land use planning provides a mechanism to prevent development in hazardous areas or allows development in a manner that minimizes damage from hazards. Land use planning gives local governments "the big picture" of what is happening in their jurisdiction.</p> <p><b>NRS 278.02521</b> – Protecting environmentally sensitive areas</p> <p><b>NRS 278.160</b> – Planning and zoning.</p> <p><b>NRS 278.580</b>—Investigation of seismic hazards: fault, fissure, and liquefaction.</p> <p><b>NRS 321.640 through 321,770</b> – Laws to govern growth and use of lands which could impact emergencies.</p> <p><b>NRS 324</b> – Regulates use of water and reclamation of water projects.</p> <p><b>NRS 376A</b> – Taxes for development of open space land.</p> <p><b>NRS 472</b> – Fire warden's duties to include preservation of forest and vegetation cover.</p> <p><b>NRS 528</b> – Regulation of forest practice and reforestation.</p> <p><b>NRS 534</b> – Planning and development of water resources and management of water resources.</p>	Local governments can use land use planning to identify those areas subject to damage from hazards and work to keep inappropriate development out of those areas. Land use planning can also be used for more regional approach when local governments work together.
<b>Subdivision Regulations</b>	<p>Sets construction and location standards for subdivision layout and infrastructure.</p> <p><b>NRS 445D</b> – Environmental covenants that attach to real property.</p>	Contains standards for such things as storm water management and erosion control
<b>Capital Improvements Planning</b>	Identifies where major public expenditures will be made over the next 5 to 10 years.	Capital Improvement Plans can secure hazard-prone areas for low risk uses,

Policy	Description of Model Codes	Applicability
		identify roads or utilities that need strengthening, replacement, or realignment, and can prescribe standards for the design and construction of new facilities.

### 8.6.5 Post-Disaster Mitigation of Building Risks

Buildings identified as necessary for post-disaster response and recovery operation would include:

- facilities used by first responders
- buildings used as evacuation centers
- water facilities needed by communities
- critical communication infrastructure
- hospitals and clinics
- major utility sources

Through partnerships with the Nevada Earthquake Safety Council, the Nevada Fire Safe Council, the State Floodplain Manager, and other groups, the state has begun a comprehensive, multi-year effort to mitigate risks posed to existing buildings identified as necessary for post-disaster response and recovery operations.

As an initial step, UNR is currently completing a project in which all URM buildings in the state are identified and geotagged with GPS coordinates in a user-friendly database. Once this database is complete, a subset of critical state and local buildings will be compiled and mapped providing vulnerability assessment information for mitigation activities as well as information for the response effort.

This database will be expanded to include additional critical facilities and structures as they are identified and located. This will be the first step in mitigating the risks posed to these structures necessary for post-disaster response and recovery operations.

**8.6.6 Integration of Mitigation with Post-Disaster Recovery**

Hazard mitigation is an integral part of Nevada's post-disaster recovery operations. When a Presidentially declared disaster occurs, a joint field office is opened and operated by FEMA. The State Hazard Mitigation Officer is co-located with the recovery Public Assistance Officer who manages the public assistance program. Staff members from several other state agencies such as NDOT, NDF, NBMG as well as local stakeholders may also be situated here, allowing for the identification of a wide spectrum of mitigation elements in recovery, repair, and restoration projects. Mitigation and public assistance program staff jointly conduct applicant briefings to discuss mitigation opportunities through both public assistance and hazard mitigation grant programs. The SHMO quickly disseminates letters of intent and information on the HMGP, and provides technical assistance to potential applicants. The SHMO coordinates with NHMPC members and with FEMA staff to develop a strong hazard mitigation strategy that includes the following elements:

- Technical services
- Support to 406 mitigation
- Hazard Mitigation Planning
- Hazard Mitigation Grant Program (HMGP) Technical Assistance
- Community Education and Outreach