

Minutes of the
Nevada Hazard Mitigation Planning Committee
10 November 2011

The Nevada Hazard Mitigation Planning Committee (NHMPC) met from 8:00 a.m. until 1:45 p.m. on Thursday, November 10, 2011 at the Clark County Regional Flood Control District, 600 S. Grand Central Parkway, Room 108, Las Vegas, Nevada. These minutes and related documents are posted on the Web site for the committee (<http://www.nbmng.unr.edu/nhmpr/nhmpr.htm>).

Attendees included:

Elizabeth Ashby, Nevada Division of Emergency Management (DEM)
Ed Atwell*, University of Nevada Police Department
Robert Carey, Operations Chief, Utah Division of Emergency Management
Shiela Curtis, Utah Division of Emergency Management
Kim Davis*, Division of Water Resources
Rick Diebold*, City of Las Vegas, Office of Emergency Management
Mike Dondero*, NV Division of Forestry
Gary Dunn*, Carson City of Emergency Management
Robert Fellows*, Carson City Public Works
Gale Fraser, Flood Plain Manager, Clark County
Terri Garside, Nevada Bureau of Mines and Geology, who held the proxy for Ron Lynn*, Department of Development Services, Clark County Building Department
Karen Johnson, Division of Emergency Management
Irene Navis, Director, Clark County Emergency Management
Jonathan Price*, Nevada Bureau of Mines and Geology
Ryan Turner, Henderson Emergency Management
Andrew Trelease*, Clark County Regional Flood Control District
Jim Walker*, Nevada Department of Transportation

* indicates a member of the Board of Directors.

Members of the Board of Directors of the Committee who were unable to attend include:

Joe Curtis*, Storey County Emergency Management
Jim Reagan*, NV Energy

WELCOME AND INTRODUCTIONS

Jon Price chaired the meeting. Attendees introduced themselves. A quorum (a majority of the 13 members of the Board of Directors) was present. Jon explained that the NHMPC meeting was being held in Clark County to allow the Committee members to meet the local officials and to receive insight into the County's hazards.

PUBLIC COMMENTS

No public comments were received.

APPROVAL OF MINUTES FROM AUGUST 25, 2011

The minutes of the August 25, 2011, meeting of the committee were unanimously approved. Minutes of the committee are posted on the NHMPC Web site at www.nbmng.unr.edu/nhmpr/nhmpr.htm.

Elizabeth Ashby gave an overview of the proposal prepared by the Division of Emergency Management for funding the update to the State's Hazard Mitigation Plan and the expenses for the NHMPC.

Karen Johnson and Elizabeth Ashby gave a brief overview of the other proposals received (detail follows).

2012 UNIFIED HAZARD MITIGATION GRANT PRIORITIZATION

This cycle, the total federal funding available nationwide is \$40 million.

Clark County School District Seismic Valves Replacement Project

This proposal is for the installation of gas shutoff-valves at school sites and other district facilities by modifying existing gas lines entering each building to accept an in-line shutoff valve. The plan is to install valves in 322 schools and school district facilities. The federal funds requested are \$501,000, matching funds are \$167,000, for a total project cost of \$668,000.

Las Vegas Academy Seismic Bracing

The project proposes the installation of bracing in the Las Vegas Academy's gymnasium in order to strengthen it against damaging earthquakes and protect the lives of students and administrative staff using the facility during an earthquake. The federal funds requested are \$633,283.50; matching funds are \$211,094.50; for a total project cost of \$844,378.

Douglas County Hazard Mitigation Plan Update

The proposed project is to review and update the current plan. The update will incorporate the establishment of a hazard mitigation team, and evaluation and revision of various sections of the plan, including a revised planning process, updated regional profile, capability assessment, hazard identification and risk assessment, vulnerability assessment, and plan-maintenance section. Also included will be man-made hazards. The plan should take 22 months to complete. The estimated federal funds requested are \$102,258; estimated matching funds are \$34,086; for an estimated total project cost of \$136,344.

State Route 88 Culvert Enhancement

The project proposes to construct five concrete culverts beneath State Route 88. The project will reduce damages to roadway infrastructure, decrease costs and repair time, and reduce community impacts due to roadway closures resulting from flood damage to the State Route 88 Bridge at the East Fork of the Carson River. It will also minimize or eliminate the risk of flooding for approximately 204 residents, existing facilities (including the County's Emergency Command Center), library, swimming pool, and several commercial buildings. The federal funds requested are \$1,557,000; matching funds are \$520,000; for a total project cost of \$2,077,000.

Caliente Youth Center Bridge Flood Mitigation

This proposed project is to replace the existing two concrete culverts in Youth Center Drive with a 90-foot spanning structure (bridge) that will increase the conveyance and capacity and reduce the risk of damage to the road and critical infrastructure (electrical substation, water and sewer lines) from local flooding. Youth Center Drive is the only access into and out of the Caliente Youth Center. The federal funds requested are \$1,860,348.75; matching funds are \$620,116.25; for a total project cost of \$2,480,465.

State Hazard Mitigation Plan Update Projects

I.A. Irrigation Ditches

The Nevada Bureau of Mines and Geology (NBMG) will analyze suburban and urban areas that may be flooded by breaches of irrigation ditches and canals and present this information in GIS format in maps. The federal funds requested are \$104,315.18; matching funds are \$34,824.66; for a total project cost of \$139,139.84.

I.B. Integration of URM data into HAZUS

Locations of potential unreinforced masonry buildings will be added into the HAZUS database for the state of Nevada and use HAZUS to calculate the reduction in risk that may be achievable for at least 20 major communities in Nevada. The federal funds requested are \$63,205.80; matching funds are \$21,068.60; for a total project cost of \$84,274.40.

I.C. MyPlan Website

New GIS layers will be added to the MyPlan website to include flood data, earthquake hazards, and a new earthquake epicenter and geodetic strain map. The federal funds requested are \$109,167.85; matching funds are \$36,389.29; for a total project cost of \$145,557.14.

I.D. Plan Update

The Nevada Bureau of Mines and Geology geologist Daphne LaPointe will work as directed by the Nevada Division of Emergency Management Hazard Mitigation Officer and the NHMPC Planning Subcommittee to review and revise the State Hazard Mitigation Plan. The federal funds requested are \$63,000; matching funds are \$21,000; for a total project cost of \$84,000.

Total federal funds requested for all four projects are \$339,688.83; matching funds are \$113,282.55; for a total project cost of \$452,971.38 for the State Hazard Mitigation Plan Update Projects.

Committee members ranked each of the six proposals submitted for new funding. Rankings were as follows:

- First priority to State Hazard Mitigation Plan Update;
- Second priority to Clark County School District for the valve replacement;
- Third priority to Caliente Spring Heights Flood Project;
- Fourth priority to Douglas County Hazard Mitigation Plan Update;
- Fifth priority to Clark County School District for seismic retrofit of the Las Vegas Academy's gymnasium; and
- Sixth priority to Douglas County for St. Route 88 culvert enlargement.

The Committee voted unanimously to approve the priorities as noted above for submission to FEMA by the Nevada Division of Emergency Management.

NHMPC VACANCY

Ryan Turner with Henderson Emergency Management has been nominated to fill the vacant Clark County Emergency Management position vacated in July by Mike Cyphers.

EARTHQUAKE HAZARDS IN CLARK COUNTY

Jon Price reported that earthquake faults occur throughout Nevada. The Nevada Bureau of Mines and Geology recently released the map *Quaternary Faults in Nevada* (NBMG Open-File Report 09-9, available at www.nbmng.unr.edu). The online version of the map is searchable, which allows for finding the large and potentially active faults in the area of a specific address. The map is to be used for approximate fault locations and should not be used as a definitive location of faults. If planning to build in

one of the zones shown on the map, it is wise to hire a geological consultant to precisely locate faults and determine their frequency of movement. By using the information icon, and clicking on a specific fault, the known information on the fault appears. The faults can be viewed on base maps showing aerial photographs or topography and roads.

Due to extension, Nevada is acquiring approximately 1.3 acres of area per year. Salt Lake City and Reno are moving apart about a centimeter a year.

Jon distributed Nevada Bureau of Mines and Geology's Open-File Report 09-8, *Estimated Losses from Earthquakes near Nevada Communities*, available at www.nbmng.unr.edu/dox/of098/Scenarios/OpenFileReport09-8.pdf. The report contains HAZUS runs for 38 communities in Nevada, essentially all towns with a population of at least 500. The report contains runs for magnitudes 5, 5.5, 6, 6.5, and 7 earthquakes. The runs were compiled using a fault on the Quaternary fault map that is closest to the center of the community. The fault depth is run at 10 km (the average depth of earthquakes in the Great Basin).

The last earthquake larger than a 3.0 in the Las Vegas area was a magnitude 3.6 on August 4, 2010. The earthquake was felt by some, but not many people.

The initial filling of Lake Mead caused minor earthquakes.

According to the U.S. Geological Survey, the probability of a magnitude 6.0 earthquake within the next 50 years occurring near (within 31 miles or 50 kilometers) Las Vegas is approximately 12%. The total economic loss from a magnitude 6 earthquake in Las Vegas is estimated at \$7.2 billion.

HAZUS is an excellent tool that city and county managers, emergency managers, and planners should use in hazard mitigation, planning, and emergency response and recovery exercises.

The consequences of earthquakes can be huge in Nevada, particularly if individuals are not prepared.

The best thing that can be done to prevent building damage and loss of life or injury is to be prepared to respond; mitigate structural risks, largely through having current building codes; and mitigate nonstructural risks.

A recent compilation of un-reinforced masonry (URM) buildings, using the County Assessors' databases, estimates that Nevada could have as many as 23,600 URMs. Because a large number of the URMs are historic buildings, the issue is to how to retrofit them to make them safe.

Jon's PowerPoint presentation on "Earthquake Hazards in Clark County" is available online at http://www.nbmng.unr.edu/Geohazards/Earthquakes/Presentations/Earthquake_Hazards_in_Clark_County_10November2011.pdf.

CLARK COUNTY FLOOD HAZARD PRESENTATION

Gale Fraser welcomed NHMPC and gave a presentation on Clark County flood hazards. Las Vegas receives an average of 4.2 inches of rain per year. It is the driest urban area in the nation. The County is approximately 8,012 square miles and is the Nation's 15th largest county.

Census data show that Las Vegas had 47,000 residents in 1950 and 2,000,000 in 2010. The Clark County Regional Flood Control District (CCRFD) was created in 1986. The Mission is to improve the protection of life and property for existing residents, future residents, and visitors from the

impacts of flooding while also protecting the environment. The Vision is to be the premier regional agency providing a community safe from devastation of floods while protecting the surface water environment.

Goal 1 is to provide master plans for the control of flooding.

Goal 2 is to implement projects that provide the community with flood protection.

The progress to date is:

- 85 detention basins
- 560 miles of channels and underground storm drains (240 miles of storm drain; 188 miles of improved channel; and 132 miles of natural channel)
- \$1.6 billion in construction
- 51 square miles of flood zones removed

Remaining to be built:

- 36 detention basins
- 240 miles of channels and underground storm drains (146 miles of storm drain and 94 miles of improved channels)
-

Goal 3 is effective regulations, criteria and programs that protect the environment and are sound storm-water management tools.

Goal 4 is to enhance public awareness of flood safety and other district programs.

Goal 5 is to seek opportunities to maximize the efficiency and effectiveness of district services.

The CCRFD's annual budget is \$305.1 million and is solely funded by a ¼ of 1% sales tax.

The Regional Flood Control District has its own television channel, The Flood Channel (Channel 4), where they televise Public Service Announcements regarding flood issues and safety.

The largest flood in Las Vegas' history was in 1999.

Jon Price presented Gale Fraser with a plaque in appreciation of his former service to the Nevada Hazard Mitigation Planning Committee.

NATIONAL FLOOD INSURANCE PROGRAM BASICS

Presentation was cancelled.

REPORT ON THE STATUS OF GRANTS

Karen Johnson reported on the status of the following funded projects:

Hazard Mitigation Grant Program (HMGP)

- HMGP1540, Waterfall Fire funding - Closed
- HMGP 1583, S. Nevada 2005 Floods - Closed
- HMGP 1629, N. NV Flood – mostly completed

- HMGP 1738, Fernley Floods – Lyon Co. plan consultant hired; Dant Wash improvement Phase I Engineering should be completed in soon; URM Inventory - on schedule; Ely Conservation seismic retrofit - application in process.

PDM (Pre-Disaster Mitigation) Grant Program

- PDM 07, awards for plans for Storey, Esmeralda, and Washoe Counties and the Henderson Sewer Project; all the plans are completed; the Henderson Sewer Project is in the construction phase.
- PDM 08, Sky Tavern Wildfire water storage tank, Clark County Mitigation Plan Update – funding awarded.
- PDM 09, Funding requests from Douglas County Emergency Management are under FEMA NEPA Review.
- PDM 10, City of Reno (Congressional earmark), Lincoln Co. Plan Update, Churchill/Mineral County Plan, and Nye County Plan Update are all funded and in process; White Pine County Plan awarded, no activity; Douglas Co. – US 395 Culvert Project, TRFP - Demo Edison Way and Storey - 6 Mile Canyon - awarded.
- Special Projects, My Plan Nevada, project started
- PDM 2011, Elko County HMP Update, Douglas County HMP Update, Douglas St. Route 88 Culvert Project, UNR Seismological Laboratory – funding pending. City of Caliente Flood, Pershing/Lander/Humboldt HMP, NV State Parks Ft. Churchill – selected for further review.
- FMA 2011, Washoe County Marlin Channel Detention – selected for further review.
- Nevada Special Projects, MyPlan Nevada and Portfolio Management – funded and project started.

SPRING FLOODING IN UTAH

Robert Carey, Operations Chief, Utah Division of Emergency Management gave a presentation on the 2011 spring flooding in Utah.

Utah is the second driest state, behind Nevada.

The snowpack in the spring of 2011 was between 150-200% of average.

The runoff from mid-March through July caused flooding in northern and central Utah. The southern area did not experience flooding because they had space in their storage basins, and their spring melting period is about a month behind northern and central Utah.

Logan River, Green River, Duchesne River, and Weber River reached 100 plus year flood-recurrence levels.

The Governor declared a State of Emergency for Utah on June 27, 2011. The President declared a major disaster for Utah on August 8, 2011.

The Utah National Guard used a helicopter to move 1,000 pound bags of sand to attempt to plug a breach in the Weber River levee.

Estimated damage costs are \$12 million each for central and northern Utah.

ACTION ITEMS FROM DISCUSSION OF 5-YEAR STRATEGIC PLAN FOR NHMPC

Elizabeth Ashby led a discussion on the action items resulting from the strategic planning discussion at the April NHMPC meeting that was held in Elko. She is working on a public awareness campaign for promoting NHMPC's activities. A subcommittee will be established to review the NHMPC bylaws.

Jon Price gave an overview of the thirteen members who make up the NHMPC. He led a discussion on whether the Committee is missing some of the areas of expertise and whether changes should be made. There was general agreement that the current committee representation and size is appropriate.

It was recommended that term limits be set for Committee members. The Committee believes that a three-year, staggered term would be the best. There will also be a clause in the bylaws stating members who do not participate or do not attend three consecutive meetings could be removed from the Committee.

Jon Price announced that he will be retiring on June 30, 2012, which prompted a discussion as to how best to fill his position as Chair. The position on the Committee as a representative of the Nevada Bureau of Mines and Geology will be filled by Craig dePolo.

Terri Garside will also be leaving the Committee on June 30, 2012.

ACTION ITEM Elizabeth Ashby will place a discussion of the NHMPC bylaws on the next meeting's agenda.

CLARK COUNTY PRESENTATION ON THE DEMOGRAPHICS, GOVERNMENT, GEOGRAPHY, ECONOMIC, AND SOCIAL PROFILE OF CLARK COUNTY

Irene Navis reported that she has been with the Clark County Emergency Management since July, 2010.

The County is approximately 8,000 square miles; 90% of which is rural. It has approximately 2 million residents and 40 million visitors each year. Eighty-six percent of the land is federally managed. The County has 92% of the State's critical infrastructure.

The urban area is about 20 miles east to west, and 30 miles north to south.

There are five incorporated cities, eleven unincorporated towns, and three Indian tribes within the County's jurisdiction.

There are eighteen wilderness areas (700 square miles), two national wildlife refuges, and four national parks.

The County has 150,000 hotel rooms and between 250,000 – 300,000 visitors on any given day. Visitors come to the area for meetings, recreation, gaming, and tourism. Occupancy rates are between 85 – 90%.

Information on the County can be found at: www.monitoringprogram.com.

The area is still experiencing a 1% growth rate (down from 6%), even with the downturn in the economy.

County hazards are floods, fires, earthquakes, extreme heat, epidemics, avalanche/landslides, critical infrastructure failure, subsidence, hazmat events, and terrorist attacks.

Unemployment is at 13.6% for ages 18-25. There are an estimated 9,500 homeless, of which 1/3 are children.

PUBLIC COMMENTS

No public comments were received.

ANNOUNCEMENTS OF FUTURE MEETINGS

Tuesday, February 7, 2012 in northern Nevada
Tuesday, May 8, 2012 in Eureka, NV
Thursday, August 9, 2012 in Douglas County
Thursday, November 15, 2012 in Henderson, Nevada

REVIEW OF ACTION ITEMS

Action item remaining from August 25, 2011:
Elizabeth Ashby will invite Stu Townsley to a future meeting to discuss the Silver Jackets Program.

Action item from November 10, 2011:
Elizabeth Ashby will place a discussion of the NHMPC bylaws on the next meeting's agenda.

ADJOURN

The meeting adjourned at 1:45 p.m.

Respectfully submitted by Terri Garside December 9, 2011.

Nevada Hazard Mitigation Planning Committee
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