City of Las Cruces®
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Council Action and Executive Summary

Item # 6 **Ordinance/Resolution#** 14-130

For Meeting of _____ (Ordinance First Reading Date)

For Meeting of February 4, 2014 (Adoption Date)

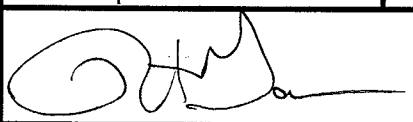
Please check box that applies to this item:

☐ QUASI JUDICIAL ☐ LEGISLATIVE ☒ ADMINISTRATIVE

TITLE: **A RESOLUTION FORMALLY APPROVING AND ADOPTING A MULTI-JURISDICTION ALL HAZARDS PLAN WITH DOÑA ANA COUNTY, CITY OF LAS CRUCES, CITY OF SUNLAND PARK, TOWN OF MESILLA, AND THE VILLAGE OF HATCH; THE MITIGATION PLAN ENSURES CONTINUING ELIGIBILITY TO RECEIVE FEDERAL ASSISTANCE FROM BOTH THE ROBERT T. STAFFORD DISASTER RELIEF ACT AND THE EMERGENCY ASSISTANCE ACT.**

PURPOSE(S) OF ACTION:

Approving and adopting an All Hazards Plan.

COUNCIL DISTRICT: NA		
Drafter/Staff Contact: Louis Grijalva, P.E.	**Department/Section:** Public Works/Project Development	**Phone:** 528-3479
City Manager Signature:		

BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:

In July of 2002, the City of Las Cruces (City), along with the Doña Ana Flood Commission (DACFC) and the Office of Emergency Management (OEM), approved procedures for the preparation of the county-wide All Hazards Mitigation Plan.

In May of 2005, the City approved Resolution 05-334 adopting a Multi-Jurisdiction All Hazards Mitigation Plan. This formal adoption enabled the City to be eligible for financial assistance under the Federal Emergency Management Agency, Flood Mitigation Assistance Program.

The All Hazards Mitigation Plan provides general guidance related to hazards (e.g., flooding, hazardous spills, etc.) within Las Cruces and incorporated communities located in Doña Ana County. It also provides an overview of the mitigation efforts undertaken by the City, County and participating communities.

The All Hazards Mitigation Plan was recently updated and a formal approval and adoption is needed to continue to be eligible for the Federal Emergency Management Agency, Flood Mitigation Assistance Program. Additionally, approval of the updated All Hazard Mitigation Plan will rescind the outdated plan, previously approved in 2005 through Resolution 05-334.

City staff recommends approval of the updated All Hazard Mitigation Plan to continue eligibility to receive federal assistance, in the event of a disaster, from both the Robert T. Stafford Disaster Relief Act (Hazard Grant Mitigation Program, Pre-Disaster Mitigation Program and the Flood Mitigation Assistance Program) and the Emergency Assistance Act. This will allow the City to obtain funding assistance to further our flood mitigation efforts in our community. No adverse effects to the budget are anticipated with the approval of this resolution.

SUPPORT INFORMATION:

1. Resolution.
2. Exhibit "A", Updated All Hazard Mitigation Plan.

SOURCE OF FUNDING:

Is this action already budgeted?			
N/A	Yes	☐	See fund summary below
	No	☐	If No, then check one below:
	Budget Adjustment Attached	☐	Expense reallocated from: _____
		☐	Proposed funding is from a new revenue source (i.e. grant; see details below)
		☐	Proposed funding is from fund balance in the ____Fund.
Does this action create any revenue?			
	Yes	☐	Funds will be deposited into this fund: _____ in the amount of $_____for FY__.
	No	☒	There is no new revenue generated by this action.

BUDGET NARRATIVE

N/A

FUND EXPENDITURE SUMMARY:

Fund Name(s)	Account Number(s)	Expenditure Proposed	Available Budgeted Funds in Current FY	Remaining Funds	Purpose for Remaining Funds
N/A	N/A	N/A	N/A	N/A	N/A

OPTIONS / ALTERNATIVES:

1. Vote "Yes"; this action will meet the requirements of the Federal Emergency Management Agency and allow the City of Las Cruces to continue to receive federal assistance under both the Robert T. Stafford Disaster Relief Act and the Emergency Assistance Act.

2. Vote "No"; this action will prevent the City of Las Cruces from receiving federal assistance in the event of a disaster.
3. Vote to "Amend"; this action could modify the resolution to enact only City of Las Cruces portions and leave some topics unchanged as deemed necessary.
4. Vote to "Table"; this action could prevent the City of Las Cruces from receiving federal assistance in the event of a disaster.

REFERENCE INFORMATION:

The resolution(s) and/or ordinance(s) listed below are only for reference and are not included as attachments or exhibits.

1. Resolution No. 02-210.
2. Resolution No. 05-334.

RESOLUTION NO. 14-130

A RESOLUTION FORMALLY APPROVING AND ADOPTING A MULTI-JURISDICTION ALL HAZARDS PLAN WITH DOÑA ANA COUNTY, CITY OF LAS CRUCES, CITY OF SUNLAND PARK, TOWN OF MESILLA, AND THE VILLAGE OF HATCH; THE MITIGATION PLAN ENSURES CONTINUING ELIGIBILITY TO RECEIVE FEDERAL ASSISTANCE FROM BOTH THE ROBERT T. STAFFORD DISASTER RELIEF ACT AND THE EMERGENCY ASSISTANCE ACT.

The City Council is informed that:

WHEREAS, in July of 2002, the City of Las Cruces (City), along with the Doña Ana Flood Commission (DACFC) and the Office of Emergency Management (OEM), approved procedures for the preparation of the county-wide All Hazards Mitigation Plan; and

WHEREAS, in May of 2005, the City approved Resolution 05-334 adopting a Multi-Jurisdiction All Hazards Mitigation Plan. This formal adoption enabled the City to be eligible for financial assistance under the Federal Emergency Management Agency, Flood Mitigation Assistance Program; and

WHEREAS, the All Hazards Mitigation Plan provides general guidance related to hazards (e.g., flooding, hazardous spills, etc.) within Las Cruces and incorporated communities located in Doña Ana County. It also provides an overview of the mitigation efforts undertaken by the City, County and participating communities; and

WHEREAS, the All Hazards Mitigation Plan was recently updated and a formal approval and adoption is needed to continue to be eligible for the Federal Emergency Management Agency, Flood Mitigation Assistance Program. Additionally, approval of the updated All Hazard Mitigation Plan will rescind the outdated plan, previously approved in 2005 thru Resolution 05-334; and

WHEREAS, City staff recommends approval of the updated All Hazard Mitigation

Plan to continue eligibility to receive federal assistance, in the event of a disaster, from both the Robert T. Stafford Disaster Relief Act (Hazard Grant Mitigation Program, Pre-Disaster Mitigation Program and the Flood Mitigation Assistance Program) and the Emergency Assistance Act. This will allow the City to obtain funding assistance to further our flood mitigation efforts in our community.

NOW, THEREFORE, Be it resolved by the governing body of the City of Las Cruces:

(I)

THAT the All Hazard Mitigation Plan previously approved through Resolution 05-334 in May of 2005, is hereby rescinded.

(II)

THAT the recently updated All Hazard Mitigation Plan, as outlined in Exhibit "A," attached hereto and made part of this Resolution, is hereby approved.

(III)

THAT City staff is hereby authorized to do all deeds necessary in the accomplishment of the herein above.

DONE AND APPROVED this _____ day of _____, 20____.

APPROVED:

_____
Mayor

ATTEST:

_____
City Clerk

(SEAL)

VOTE:
Mayor Miyagishima: _____
Councillor Silva: _____
Councillor Smith: _____
Councillor Pedroza: _____
Councillor Small: _____
Councillor Sorg: _____
Councillor Levatino: _____

Moved by: _____

Seconded by: _____

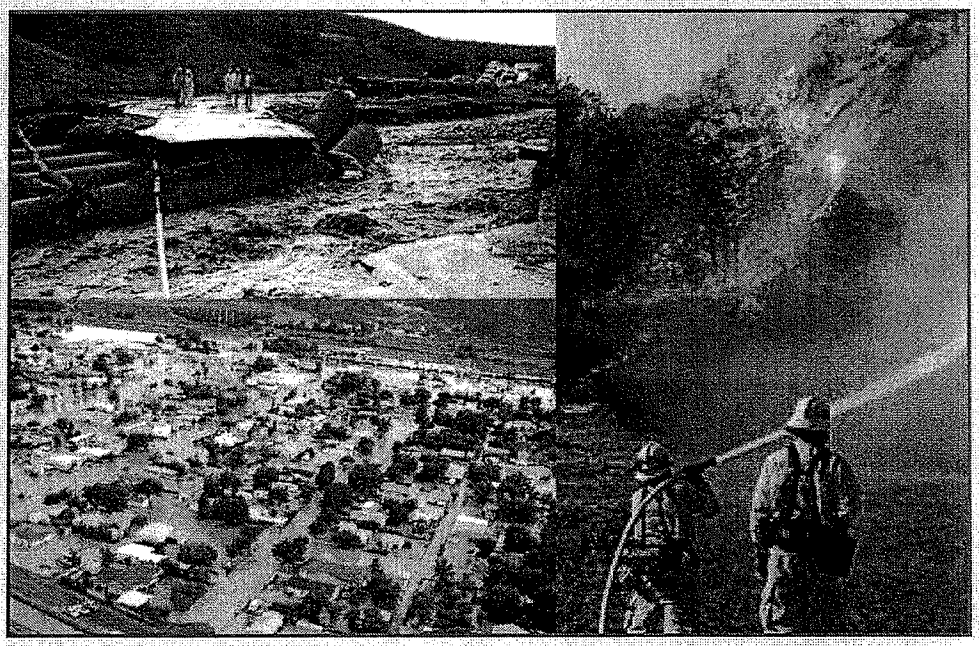
APPROVED AS TO FORM:

_____
City Attorney

Doña Ana County

City of Anthony, City of Las Cruces, Elephant Butte Irrigation District, Village of Hatch, Town of Mesilla, New Mexico State University, and City of Sunland Park

ALL HAZARD MITIGATION PLAN



Final: October 2013

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EXECUTIVE SUMMARY

Across the United States, natural and human-caused disasters have led to increasing levels of death, injury, property damage, and interruption of business and government services. The toll on families and individuals can be immense and damaged businesses cannot contribute to an already declining economy. The time, money and effort involved with response to and recovery from these emergencies or disasters divert public resources and attention from other important programs and problems. Since 2000, Doña Ana County citizens have endured one federal disaster declaration and approximately 170 other documented and significant natural hazard events, as documented in Section 4 and Appendix E. The jurisdictions that participated in this planning effort, recognize the consequences of disasters and the need to reduce the impacts of natural and human-caused hazards. The County and jurisdictions also know that with careful selection, mitigation actions in the form of projects and programs can become long-term, cost effective means for reducing the impact of natural and human-caused hazards.

The elected and appointed officials of Doña Ana County, Hatch, Las Cruces, Mesilla and Sunland Park, demonstrated their commitment to hazard mitigation in 2003-2004 by preparing the *Doña Ana County, City of Las Cruces, City of Sunland Park, Town of Mesilla, Village of Hatch, New Mexico All Hazard Mitigation Plan* (2004 Plan). The 2004 Plan was approved by FEMA on August 31, 2005, and expired on the same day five years later. FEMA requires that all local and tribal hazard mitigation plans be fully updated and resubmitted to the State and FEMA for approval.

In response, the Doña Ana County Flood Commission secured funding and hired Tectonic Engineering and Surveying, PC to provide consulting services in guiding the planning process and Plan development. JE Fuller/ Hydrology was retained by Tectonic as sub-consultant to assist with the effort. Doña Ana County organized and reconvened a multi-jurisdictional steering committee comprised of veteran and first-time representatives from each participating jurisdiction, various county and local jurisdiction departments and organizations, the New Mexico Department of Homeland Security and Emergency Management, local school districts, and New Mexico State University. The Steering Committee met four times during the period of December 2011 to April 2012 in a collaborative effort to review, evaluate, and update the 2004 Plan.

The resulting *Doña Ana County, City of Anthony, City of Las Cruces, City of Sunland Park, Town of Mesilla, Village of Hatch, Elephant Butte Irrigation District, and New Mexico State University All Hazard Mitigation Plan* (Plan) will continue to guide the county and participating jurisdictions toward greater disaster resistance in full harmony with the character and needs of the community and region.

The Plan has been prepared in compliance with Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act or the Act), 42 U.S. C. 5165, enacted under Sec. 104 the Disaster Mitigation Act of 2000, (DMA 2000) Public Law 106-390 of October 30, 2000, as implemented at CFR 201.6 dated October, 2007. The Plan summarizes the overall planning process, risk assessment results for selected natural hazards, and mitigation measures intended to eliminate or reduce the effects of future disasters throughout the county. The Plan was developed in a joint and cooperative venture by the members of the Doña Ana County Steering Committee and Tectonic consulting team.

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SECTION 1: INTRODUCTION

1.1 DMA 2000 Requirements

1.1.1 General Requirements

The Doña Ana County, City of Anthony, Elephant Butte Irrigation District, Village of Hatch, City of Las Cruces, Town of Mesilla, New Mexico State University and City of Sunland Park All Hazard Mitigation Plan (Plan) has been prepared in compliance with Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Stafford Act), 42 U.S.C. 5165, as amended by Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) Public Law 106-390 enacted October 30, 2000. The regulations governing the mitigation planning requirements for local mitigation plans are published under the Code of Federal Regulations (CFR) Title 44, Section 201.6 (44 CFR §201.6). Additionally, this DMA 2000 compliant Plan addresses flooding and meets the minimum planning requirements for the Flood Mitigation Assistance program as provided for under 44 CFR §78.

DMA 2000 provides requirements for states, tribes, and local governments to undertake a risk-based approach to reducing risks to natural hazards through mitigation planning[1]. The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans also serve as a tool for a state to provide technical assistance and prioritize project funding.

Under 44 CFR §201.6, local governments must have a Federal Emergency Management Agency (FEMA)-approved local mitigation plan in order to apply for and/or receive project grants under the following hazard mitigation assistance programs:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- Severe Repetitive Loss (SRL)

FEMA, at its discretion, may also require a local mitigation plan under the Repetitive Flood Claims (RFC) program as well.

1.1.2 Update Requirements

DMA 2000 requires that local plans be updated every five years, with each plan cycle requiring a complete review, revision, and approval of the plan at both the state and FEMA levels. Doña Ana County and the incorporated communities of Hatch, Las Cruces, Mesilla and Sunland Park were all adopting jurisdictions of the current hazard mitigation plan entitled: *Doña Ana County, City Of Las Cruces, City of Sunland Park, Town Of Mesilla, Village Of Hatch, New Mexico All Hazard Mitigation Plan* (2004 Plan).

This Plan is the result of a multi-jurisdictional hazard mitigation planning update process performed by Doña Ana County, the incorporated communities of Anthony, Hatch, Las

[1] FEMA, 2008, *Local Multi-Hazard Mitigation Planning Guidance*

Cruces, Mesilla and Sunland Park, Elephant Butte Irrigation District, and New Mexico State University. The result of the hazard mitigation planning process is a single, multi-jurisdictional plan that will replace the 2004 Plan.

1.2 Official Jurisdiction Participation and Record of Adoption and Approval

Adoption of the Plan is accomplished by the governing body for each participating jurisdiction in accordance with the authority and powers granted to those jurisdictions by the State of New Mexico. The officially participating jurisdictions in the Plan include:

County	Cities, Towns, Villages	Other Agencies
• Doña Ana County	• City of Anthony • City of Las Cruces • City of Sunland Park • Town of Mesilla • Village of Hatch	• Elephant Butte Irrigation District • New Mexico State University

Each jurisdiction will keep a copy of their official resolution of adoption located in Appendix F of their copy of the Plan.

The Plan was submitted to the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM), the authorized state agency, and FEMA for review and approval. FEMA's approval letter is included in Appendix F.

1.3 Plan Purpose and Authority

The purpose of the Plan is to identify natural hazards and certain human-caused hazards that impact the various jurisdictions located within Doña Ana County, assess the vulnerability and risk posed by those hazards to community-wide human and structural assets, develop strategies for mitigation of those identified hazards, present future maintenance procedures for the plan, and document the planning process. The Plan is prepared in compliance with DMA 2000 requirements and represents a complete revision of the 2004 Plan. The State and FEMA review of this Plan was based on the criteria for a new plan.

Doña Ana County and all of the participating jurisdictions are political subdivisions of the State of New Mexico and are organized under 2011 NMSA 1978 (unannotated) / Chapter 3 Municipalities, Chapter 4 Counties, Chapter 21 State and Private Education Institutions, and/or Chapter 73 Special Districts. As such, each of these entities is empowered to formally plan and adopt the Plan on behalf of their respective jurisdictions.

Funding for the development of the Plan was provided through a Sub-Grant Agreement between Doña Ana County and NMDHSEM using HMGP funds from the presidential disaster declaration FEMA-1783-DR. The funding cost share was 75% federal and 25% local. The Doña Ana County Flood Commission applied for, secured, and administrated the grant for the County. Tectonic Engineering and Surveying, PC (Tectonic), was retained by Doña Ana County to provide consulting services in guiding the planning process and Plan development and was selected through the County's Request For Proposal process. JE Fuller/ Hydrology and Geomorphology, Inc. (JEF) was retained by Tectonic as a sub-consultant to assist with the effort.

1.4 Plan Description

1.4.1 2004 Plan History

In July 2002, the Doña Ana County Office of Emergency Management (OEM) and the Doña Ana County Flood Commission approved procedures for preparation of a countywide mitigation plan for Doña Ana County and Incorporated Areas, New Mexico. The Doña Ana County OEM and Flood Commission selected a consultant team to provide planning assistance and guidance for the project and a mitigation planning committee was formally recognized on July 2, 2002. Over the course of nearly three years, the planning committee and consultants worked to prepare and compile a formal DMA 2000 compliant mitigation plan, and in November 2004, the final draft was delivered to the state and FEMA for review and approval. Final FEMA approval was granted on August 31, 2005 and the 2004 Plan expired on August 31, 2010.

1.4.2 General Content and Arrangement

The Plan is generally arranged and formatted to facilitate its review based on the review guidelines recently published by FEMA [2] and is comprised of the following major sections:

Section 1: Introduction – this section provides an overall introduction to the requirements, scope, and authority of the Plan, as well as some introductory information about the County and participating jurisdictions.

Section 2: Planning Process – this section summarizes the planning process used to update the Plan, describes the assembly of the Steering Committee and meetings conducted, and summarizes the public involvement efforts.

Section 3: Risk Assessment – this section summarizes the identification and profiling of natural and human-caused hazards that impact the County and the vulnerability assessment for each hazard that considers exposure/loss estimations and development trend analyses.

Section 4: Mitigation Strategy – this section presents a capability assessment for each participating jurisdiction and summarizes the Plan mitigation goals, objectives, actions/projects, and strategy for implementation of those actions/projects.

Section 5: Plan Maintenance Strategy – this section outlines the proposed strategy for evaluating and monitoring the Plan, updating the Plan in the next 5 years, incorporating plan elements into existing planning mechanisms, and continued public involvement.

Appendices – appendices are provided for documenting various elements of and details of the planning process.

This Plan is the result of a thorough update process that included a section by section review and evaluation of the 2004 Plan by the Steering Committee participants. At the onset, each participating jurisdiction was provided a digital copy of the 2004 Plan and was encouraged to print a working copy for use during the update process. With each meeting, the Steering Committee systematically reviewed each section of the 2004 Plan. More discussion regarding this process is summarized in Section 2 of this Plan. In general, the 2004 Plan was

[2] 2011, FEMA, Local Mitigation Plan Review Guide

prepared to follow FEMA Community Rating System (CRS) guidelines and then modified as needed to meet the DMA 2000 requirements. The Steering Committee agreed that the 2004 Plan should be completely rearranged to comport with the recently FEMA published review guidelines and crosswalk. Accordingly, the format of the entire 2004 Plan has been dropped and rearranged per the sections previously listed.

1.5 County Overview

1.5.1 History

Doña Ana County is one of 33 counties in the state of New Mexico. It was created in 1852 and is the second-most populated county in the state. According to the Doña Ana Historical Society, travelers between Mexico City and Santa Fe traversed Doña Ana County for more than 400 years, leaving a fascinating history, full of interesting people, places, events, and stories. Doña Ana County's rich and varied background predates that of Jamestown and Plymouth, as its history goes back to those first Spanish adventurers who wandered into this unknown territory in 1536. It was not until 1843 that the first intrepid settlers came north and established the Doña Ana Bend Colony, the County's first permanent settlement.[3] In 1900, the County hosted an agriculturally based society with a population of 10,187. The market centers were Las Cruces, El Paso and Ciudad Juarez. By 1990, the County was urbanized with a population of 135,510 and boasted an economy based on service and retail. Rapid population growth has occurred in and around the city of Las Cruces, as well as in the southern part of the County. The part of the County north of Hill remains primarily rural in nature.

1.5.2 Geography

The County comprises 3,804 square miles in south-central New Mexico as depicted in Figure 1-1. The County shares a portion of the east and southeast borders with El Paso County, Texas, its remaining southern border with the State of Chihuahua, Mexico, its western border with Luna County, its northern border with Sierra County, and a portion of the eastern border with Otero County. The County limits generally extend from longitude 106.31 to 107.32 degrees west and latitude 31.79 to 33.07 degrees north.

There are many geographically diverse areas within Doña Ana County, including mountain ranges, valleys and deserts. The most notable is the Mesilla Valley, which is essentially the geologic floodplain of the Rio Grande, that extends north to south through the center of the County. Rising from the valley are the San Andres and Organ Mountains along the eastern edge and the Sierra de las Uvas on the west. Other smaller mountain ranges in the County include the Robledo Mountains, Doña Ana Mountains, East and West Potrillo Mountains, and two small, isolated mountains, Tortugas (or A) Mountain on the east and Picacho Peak on the west side of Las Cruces. The County also includes one of New Mexico's four large lava fields, the Aden Malpais, and one of the world's largest maar volcanoes, Kilbourne Hole.[4]

[3] Doña Ana Historical Society, 2012, webpage URL: http://www.donaanacountyhistsoc.org/dachistory.html

[4] Wikipedia, 2012, webpage URL: http://en.wikipedia.org/wiki/Do%C3%B1a_Ana_County,_New_Mexico

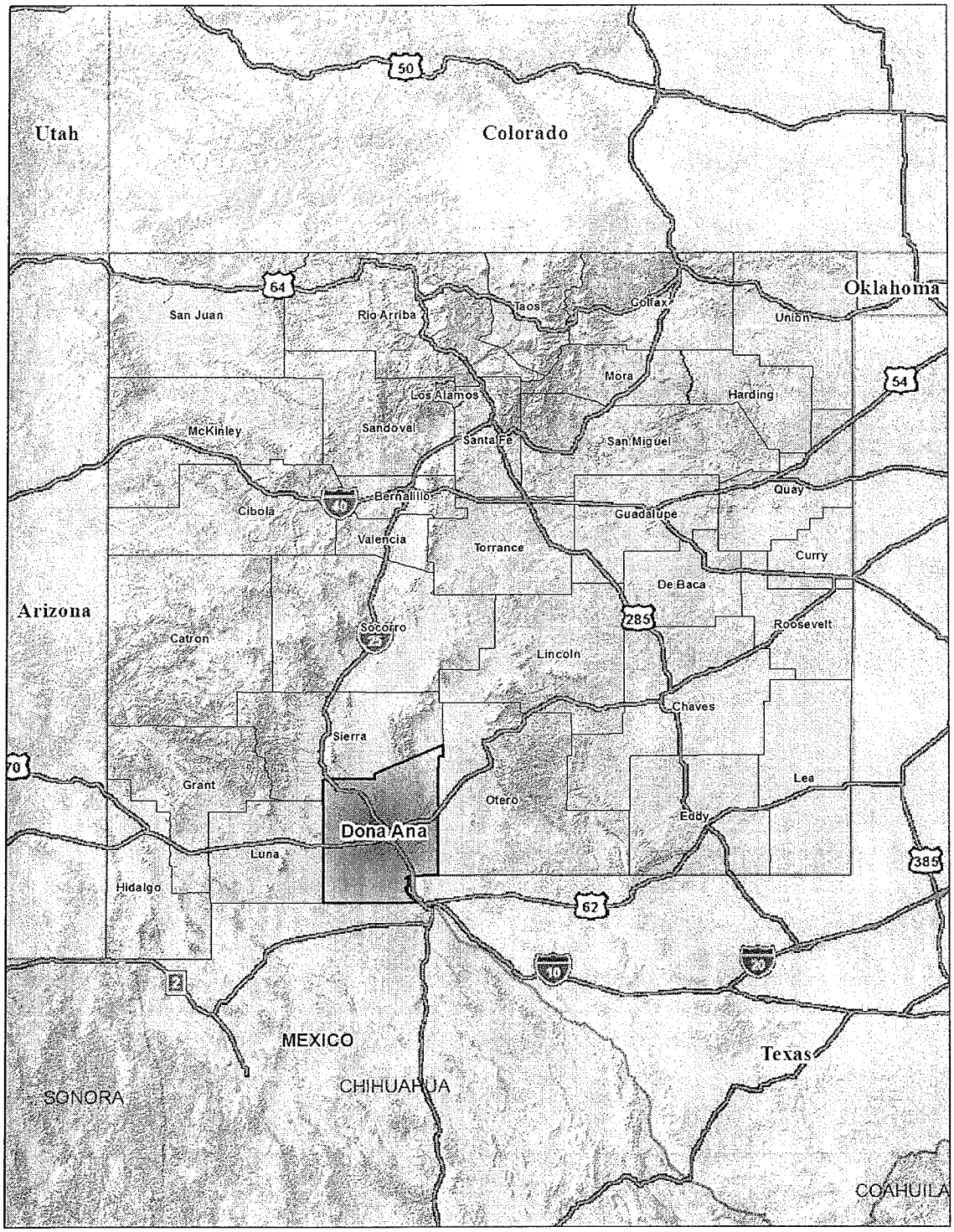


Figure 1-1
Vicinity Map

Elevations across the County range between approximately 8,900 feet at Organ Peak to approximately 3,750 feet at the southern end of the Mesilla Valley.

1.5.3 Transportation

Major roadway transportation routes through the County include U.S. Interstate Highways 10 (Los Angeles, California to Jacksonville, Florida) and 25 (Las Cruces, New Mexico to Billings, Montana)and U.S. Highways 70 and 85. There are also many state highways that serve mainly as rural farm roads. The County has three public airports located in Las Cruces, Hatch, and Santa Teresa. Rail freight is provided by both the Atchinson, Topeka and Santa Fe Railway (AT&SF) and the Southern Pacific Railway (SP). These railways have direct connections to the Midwest, California, and Texas Gulf. Daily rail service with "piggy back" and container service is provided by both rail companies in El Paso, Texas and major truck-rail (intermodal) facilities are being planned for future regional needs in Doña Ana County. Figure 1-2 shows all the major roadway and railway transportation routes and the airports within Doña Ana County.

1.5.4 Climate

Climatic statistics for weather stations within Doña Ana County are produced by the Western Region Climate Center[5] and span records dating back to the late 1890's. Three climate stations representing geographically different areas of Doña Ana County are shown on Figure 1-2. Figures 1-3, 1-4, and 1-5 present graphical depictions of temperature variability and extremes throughout the year for the Hatch 2W, State University, and Santa Teresa AP Stations, respectively. In general, average temperatures within Doña Ana County range from below freezing during the winter months to over 100 degrees Fahrenheit during the hot summer months. The severity of temperatures in either extreme is highly dependent upon the location, and more importantly the altitude, within the County.

Precipitation throughout Doña Ana County is governed to a great extent by elevation and season of the year. Average annual precipitation for most of the County averages around 10 inches. Summer rains fall almost entirely during brief, but frequently intense thunderstorms, which are often accompanied by strong winds, blowing dust, and hail storms. The general southeasterly circulation from the Gulf of Mexico brings moisture for these storms into the state, and strong surface heating combined with orographic lifting as the air moves over higher terrain causes air currents and condensations. July and August are the rainiest months with from 30 to 40 percent of the year's total moisture falling at that time. During the warmest six months of the year, May through October, total precipitation averages from 60 to 70 percent of the annual total for the County.

[5] Most of the data provided and summarized in this Plan are taken from the WRCC website beginning at the following URL: http://www.wrcc.dri.edu/CLIMATEDATA.html.

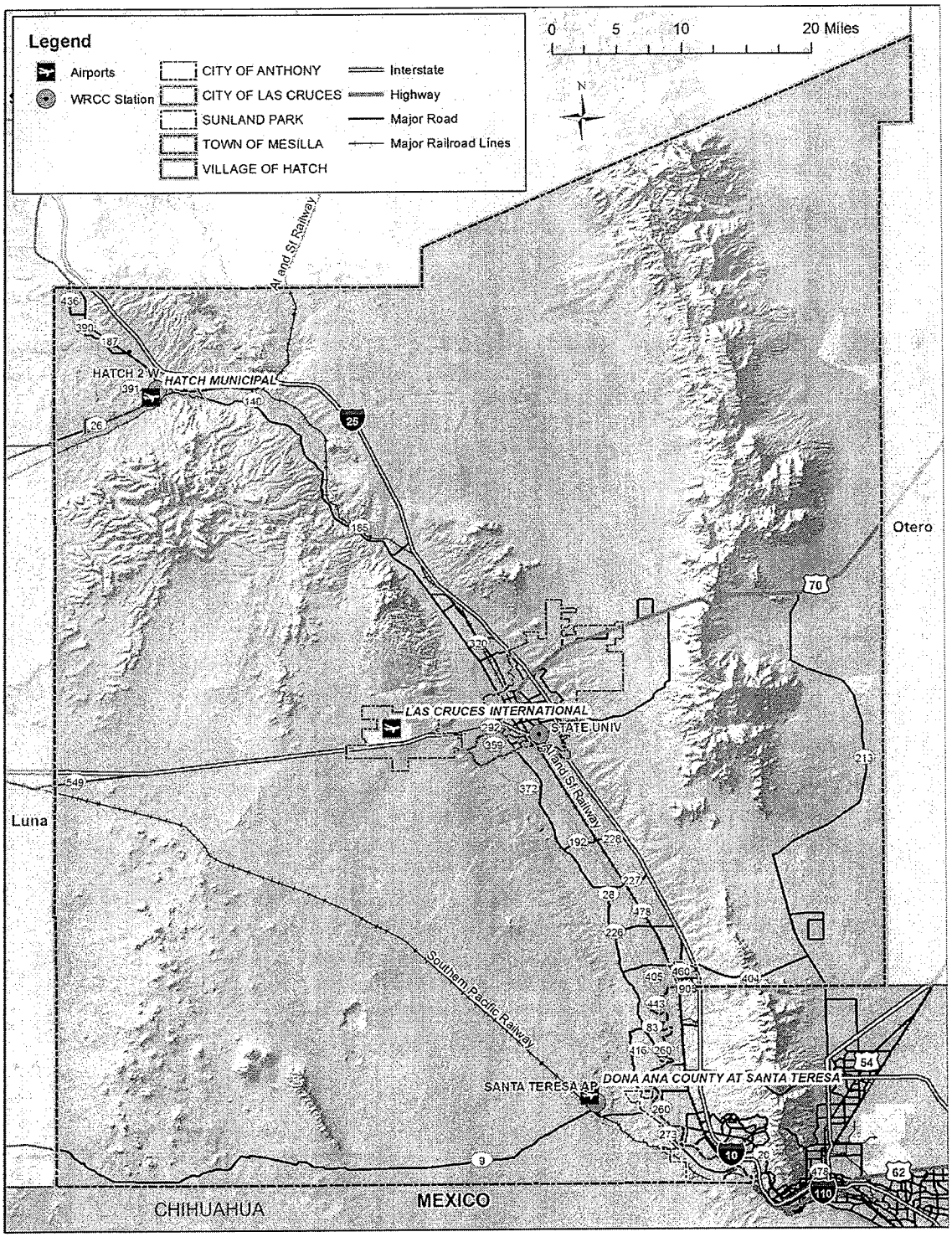


Figure 1-2
Transportation Routes Map

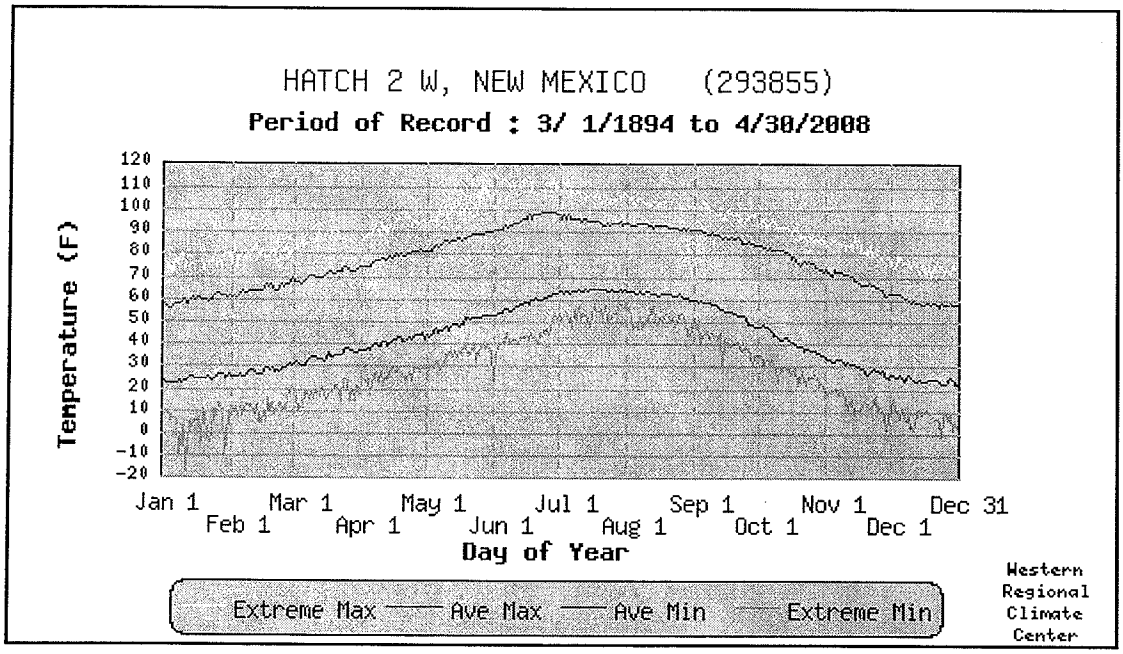


Figure 1-3
Daily Temperatures and Extremes for Hatch 2W Station, New Mexico

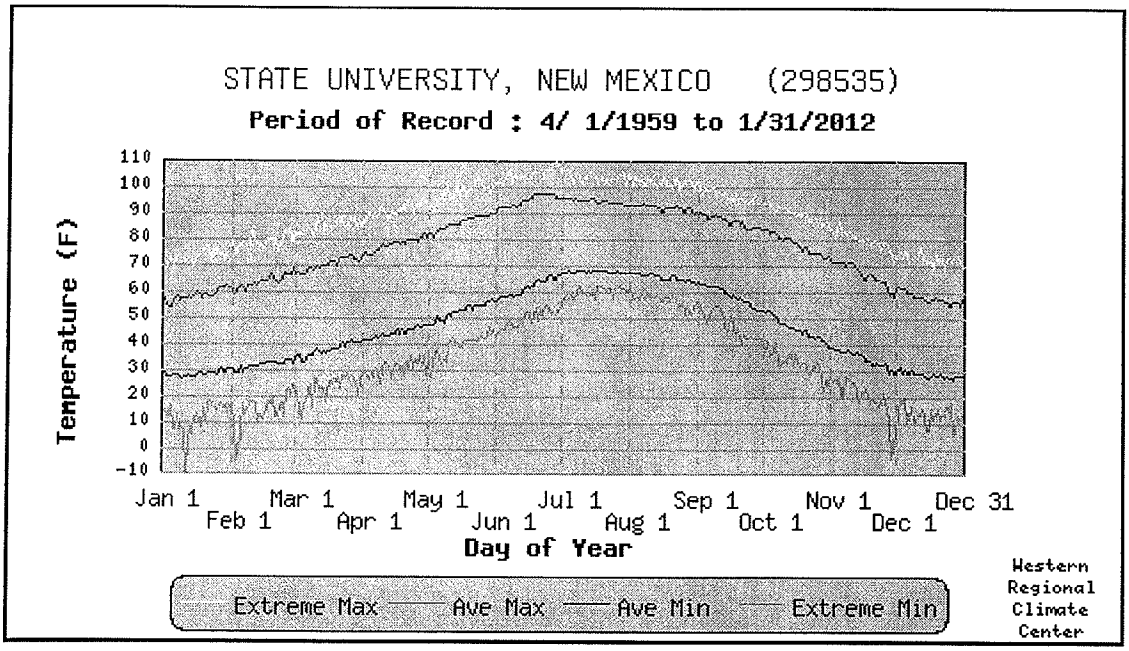


Figure 1-4
Daily Temperatures and Extremes for State University Station, New Mexico

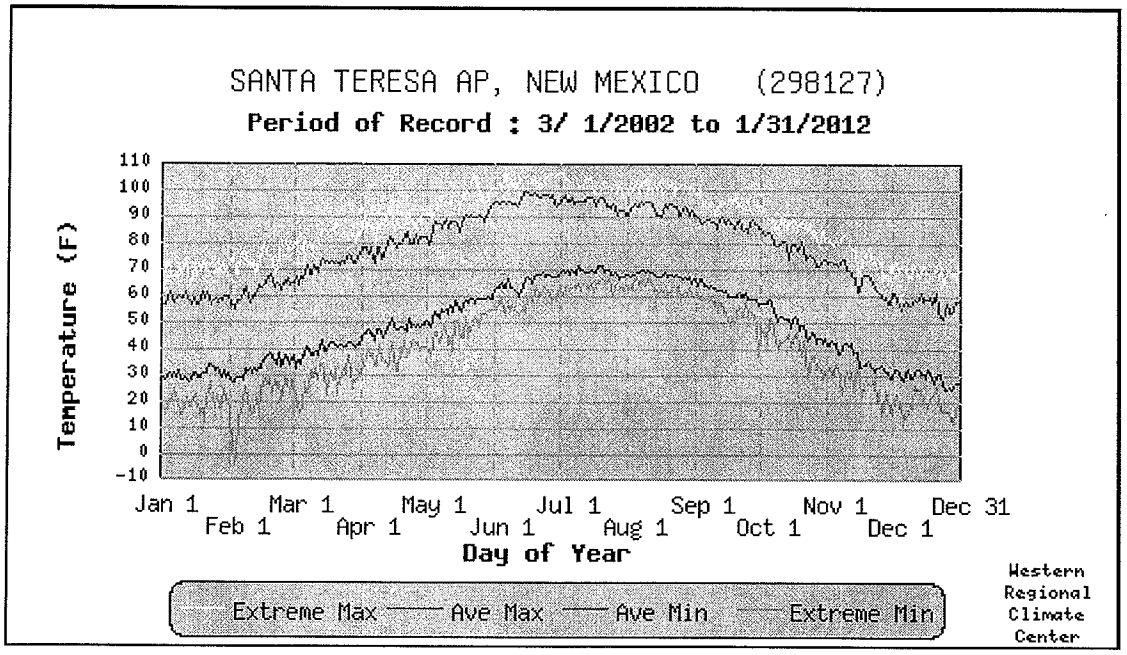


Figure 1-5
Daily Temperatures and Extremes for Santa Teresa AP Station, New Mexico

Winter precipitation is caused mainly by frontal activity associated with the general movement of Pacific Ocean storms across the country from west to east. As these storms move inland, much of the moisture is precipitated over the coastal and inland mountain ranges of California, Nevada, Arizona, and Utah. Much of the remaining moisture falls on the western slope of the Continental Divide. Winter is the driest season in Doña Ana County and winter precipitation can occur as either rain or snow, depending on the storm. Figures 1-6, 1-7, and 1-8 show tabular temperature and precipitation statistics for the Hatch 2W, State University, and Santa Teresa AP Stations, respectively. Statistics for other stations within the County and surrounding area may be viewed by accessing the WRCC website.

1.5.5 Population

The 2010 Census population estimate for Doña Ana County was 209,233 which is 19.8% greater than the 2000 Census of 174,682. A majority of the population is located in the Las Cruces metropolitan area. The other concentration of population is in the Sunland Park/Anthony area. Other non-incorporated communities and places located throughout the County are usually situated along a major highway and are mostly comprised of only one structure or landmark. Table 1-1 summarizes jurisdictional population statistics for the incorporated cities/towns/villages within the County.

HATCH 2 W, NEW MEXICO (293855)

Period of Record Monthly Climate Summary

Period of Record : 3/ 1/1894 to 4/30/2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	58.8	63.6	70.4	78.2	86.5	95.1	94.8	92.7	87.7	78.7	67.8	58.7	77.8
Average Min. Temperature (F)	23.9	27.2	33.9	40.6	48.5	57.1	63.3	61.7	54.3	41.4	29.9	23.8	42.1
Average Total Precipitation (in.)	0.47	0.38	0.26	0.28	0.30	0.62	1.88	2.06	1.47	0.90	0.39	0.67	9.66
Average Total SnowFall (in.)	1.1	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	3.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 70.6% Min. Temp.: 70.7% Precipitation: 94% Snowfall: 70.6% Snow Depth: 68.8%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Figure 1-6
Monthly Climate Summary for Hatch 2W Station, New Mexico

STATE UNIVERSITY, NEW MEXICO (298535)

Period of Record Monthly Climate Summary

Period of Record : 4/ 1/1959 to 1/31/2012

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	58.2	63.2	70.2	77.9	86.4	94.8	94.8	92.2	87.1	78.5	67.0	57.8	77.3
Average Min. Temperature (F)	28.1	31.5	37.2	43.9	52.3	61.5	67.5	65.6	58.7	46.1	34.7	28.5	46.3
Average Total Precipitation (in.)	0.47	0.38	0.22	0.22	0.32	0.69	1.56	2.10	1.35	0.85	0.46	0.69	9.32
Average Total SnowFall (in.)	0.9	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.3	3.4
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99.6% Min. Temp.: 99.6% Precipitation: 99.6% Snowfall: 99.5% Snow Depth: 99.3%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Figure 1-7
Monthly Climate Summary for State University Station, New Mexico

SANTA TERESA AP, NEW MEXICO (298127)

Period of Record Monthly Climate Summary

Period of Record : 3/ 1/2002 to 1/31/2012

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	58.5	62.3	71.1	79.1	88.1	96.6	95.1	93.2	87.5	78.2	66.6	57.1	77.8
Average Min. Temperature (F)	29.8	32.6	39.2	46.9	55.6	65.1	69.0	67.8	61.4	49.8	36.6	28.8	48.5
Average Total Precipitation (in.)	0.53	0.60	0.15	0.18	0.41	0.75	2.27	1.71	1.34	0.81	0.57	0.50	9.81
Average Total SnowFall (in.)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	1.4
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Figure 1-8
Monthly Climate Summary for Santa Teresa AP Station, New Mexico

Table 1-1: Jurisdictional population estimates for Doña Ana County				
Jurisdiction	**2000**	**2010**	**2015**	**2020**
Doña Ana County – TOTAL	174,682	209,233	237,241	256,619
Doña Ana County – Unincorporated	83,253	84,305	78,761	no data
Cities, Towns and Villages				
City of Anthony (Anthony CDP)	(7,904)	(9,360)	14,955	no data
Village of Hatch	1,673	1,648	2,228	no data
City of Las Cruces	74,267	97,618	111,941	no data
Town of Mesilla	2,180	2,196	4,816	no data
City of Sunland Park	13,309	14,106	24,540	no data

Sources:
- *Figures for 2000 and 2010 from US Census Bureau*
- *2015 and 2020 county projections from Bureau of Business and Economic Research, University of New Mexico, release date of August 2008.*
- *2015 City, Town, Village Projections from Doña Ana Comprehensive Plan*

1.5.6 Economy

Section 5.10 of the *One Valley, One Vision 2040 Regional Plan* (OVOV 2040)[6] provides a very comprehensive discussion of the economic conditions and factors impacting Doña Ana County. Excerpts and information from that document are included below.

Agriculture – Agriculture is part of the region's heritage and is still very important to its economy and culture. Doña Ana County leads New Mexico counties in total market value and production of agricultural commodities like upland cotton, onions, tomatoes, chile, pecans, greenhouse products, colonies of bees, alfalfa hay, corn silage, and eggs. In 2010, Doña Ana County ranked third out of all other New Mexico counties for the number of milk cows and fifth for head of cattle and calves. Doña Ana County regularly ranks first, or in the top three, of New Mexico counties for total annual cash receipts, with half this value from crops and half from livestock.

Employment – The central portion of Doña Ana County offers many existing and new employment opportunities. Las Cruces, Mesilla, and the Las Cruces Extra-Territorial Zone (ETZ) make up the majority of this area. It is home to many of the largest employers in the area, including Las Cruces Public Schools and New Mexico State University. East of this area is White Sands Missile Range. The northern communities of Hatch and Rincon offer many agricultural and industrial opportunities. The development of Spaceport America in southern Sierra County has the potential to attract thousands of jobs, many of which may locate in Las Cruces and northern Doña Ana County. The southern portion of Doña Ana County has potential to become a major center of activity due to its high rate of population growth over the past 30 years and adjacency to both the Mexican border and El Paso, Texas. The Santa Teresa Port of Entry, Doña Ana County Airport, and Sunland Park Racetrack and Casino are existing economic drivers for this area. The Union Pacific railroad is expanding its

[6] Doña Ana County, 2012, *One Valley, One Vision 2040 Regional Plan*

operations by building a new multi-mode railroad hub in Santa Teresa, which is projected to provide Southern New Mexico with a $500 million economic boost.

Growth in manufacturing, transportation and warehouse jobs for the central and southern parts of the County are possible because of its proximity to maquiladora industries and ports of entry in New Mexico and Texas. Some major maquiladoras with plants in Chihuahua, Mexico include Lear Corporation, which manufactures and distributes automotive interior systems, Electrolux, which manufactures appliances, Delphi Automotive LLP, a parts supplier for General Motors, and FoxConn which makes electronics. In recent years, clean-energy jobs have begun to develop, owing largely to the region's favorable climate and abundant solar resources. Agriculture, long the backbone of the economy in Doña Ana County, should continue to serve a major function.

As indicated by Table 1-1, growth in Doña Ana County on a whole has been moderate, with most of the growth occurring in metropolitan Las Cruces area and the southern region of the County around Sunland Park and Anthony. The Village of Hatch actually decreased in population from 2000 to 2010, and other areas essentially experienced no growth.

Figure 1-9 presents the number of residential and commercial building permits issued for Doña Ana County during the period of 2004 to 2010, as compiled by the Mesilla Valley Economic Development Alliance [7]. The trend is one of a general decline in building permits issued since the housing boom of the 2005-2006 timeframe.

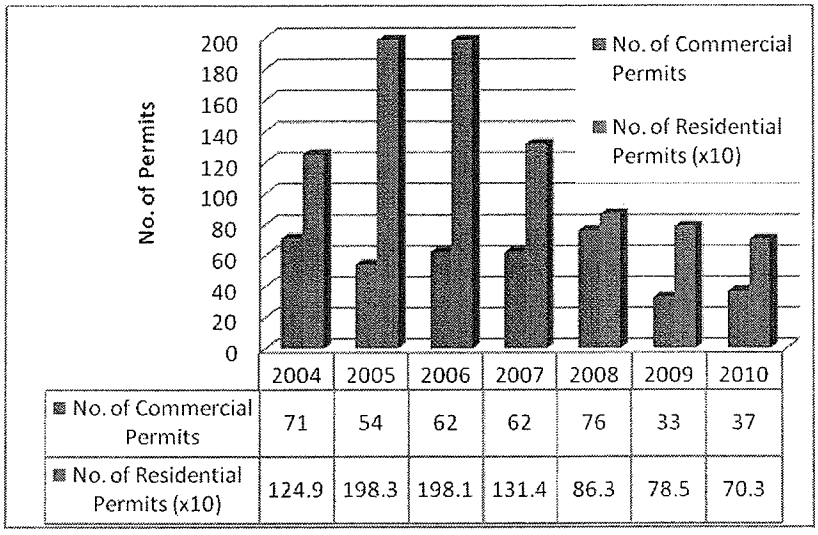
As of March 2012, the estimated Labor Force for the Las Cruces MSA is 93,002 with an unemployment rate of approximately 7.2%[8]

Gross Receipts – Table 1-2 provides a listing of gross receipts for fiscal year 2011 as reported by the New Mexico Taxation and Revenue Department.[9]

[7] Mesilla Valley Economic Development Alliance website, URL at: http://www.mveda.com/html/economic_indicators.html

[8] New Mexico Department of Workforce Solutions, Labor Analysis Statistics and Economic Research website, URL at: http://laser.state.nm.us/default.asp

[9] New Mexico Taxation and Revenue Department website, URL at: http://www.tax.newmexico.gov/Tax-Library/Economic-and-Statistical-Information/Pages/Quarterly-RP-80-Reports-Gross-Receipts-by-Geographic-Area-and-2-digit-NAICS-Code.aspx



	2004	2005	2006	2007	2008	2009	2010
No. of Commercial Permits	71	54	62	62	76	33	37
No. of Residential Permits (x10)	124.9	198.3	198.1	131.4	86.3	78.5	70.3

Source: Mesilla Valley Economic Development Alliance

Figure 1-9
Annual residential and commercial building permits for Doña Ana County

Table 1-2: 2011 Gross receipts for Doña Ana County and incorporated jurisdictions

	2011 Gross Receipts (x$1,000)					
Category	City of Anthony	Village of Hatch	City of Las Cruces	Town of Mesilla	City of Sunland Park	Doña Ana County (Uninc.)
Agriculture, Forestry, Fishing and Hunting	$0	$6,796	$10,630	$0	$207	$48,674
Mining and Oil and Gas Extraction	$0	$0	$0	$0	$0	$1,232
Utilities	$0	$2,203	$90,098	$2,774	$15,848	$91,031
Construction	$13,192	$5,782	$468,888	$3,357	$24,983	$346,684
Manufacturing	$735	$2,147	$448,207	$2,137	$2,020	$126,320
Wholesale Trade	$1,451	$6,423	$304,746	$1,552	$5,681	$418,823
Retail Trade	$5,375	$17,052	$1,468,327	$8,645	$21,802	$164,244
Transportation and Warehousing	$2,975	$3,753	$80,771	$0	$6,893	$336,217
Information and Cultural Industries	$3,041	$1,698	$125,634	$2,370	$5,557	$64,711
Finance and Insurance	$1,904	$120	$30,269	$0	-$74	$1,124
Real Estate and Rental and Leasing	$743	$527	$73,714	$328	$3,521	$25,482
Professional, Scientific and Technical Services	$1,432	$458	$347,499	$959	$3,186	$159,095
Management of Companies and Enterprises	$0	$0	$1,300	$0	$0	$0
Admin and Support, Waste Mgt and Remed	$2,792	$0	$26,511	$0	$143	$71,210
Educational Services	$102	$0	$12,280	$0	$11,788	$688
Health Care and Social Assistance	$9,930	$435	$1,133,981	$1,363	$17,033	$27,892

Table 1-2: 2011 Gross receipts for Doña Ana County and incorporated jurisdictions						
	2011 Gross Receipts (x$1,000)					
Category	City of Anthony	Village of Hatch	City of Las Cruces	Town of Mesilla	City of Sunland Park	Doña Ana County (Uninc.)
Arts, Entertainment and Recreation	$0	$0	$9,129	$152	$9,236	$3,896
Accommodation and Food Services	$1,615	$3,707	$231,379	$12,348	$8,813	$13,785
Other Services (except Public Admin)	$4,753	$537	$243,374	$3,031	$6,457	$79,761
Public Administration	$0	$0	$0	$0	$0	$289
Unclassified Establishments	$0	$0	$991	$0	$172	$324
Totals	**$53,600**	**$53,217**	**$5,133,438**	**$39,875**	**$153,624**	**$1,983,048**
Source: New Mexico Taxation and Revenue Department, 2012						

1.5.7 Land Ownership/Management

According to 2012 Bureau of Land Management records, land ownership/management within Doña Ana County is comprised of approximately 13.4% Private, 11.8% State, and 74.8% Federal interests. Table 1-3 summarizes the general land ownership statistics for Doña Ana County and Figure 1-10 depicts the geographic distribution of the holdings.

Table 1-3: Land ownership/management for Doña Ana County		
Ownership / Management Agency or Entity	**Land Area (SqMiles)**	**Percent of Doña Ana County**
US Bureau of Land Management	1,743.25	45.71%
US Bureau of Reclamation	1.31	0.03%
US Department of Agriculture	171.03	4.48%
US Department of Defense	766.77	20.10%
US Fish and Wildlife Service	88.72	2.33%
National Park Service	81.72	2.14%
Private	509.83	13.37%
State of New Mexico	450.33	11.81%
New Mexico State Park	0.89	0.02%
Source: U.S. Bureau of Land Management, 2012		

The government agencies having the largest landholdings in the County are:

- **U.S. Bureau of Land Management (BLM)** – the BLM has over 1,743 square miles of federally-owned land (45.7% of Doña Ana County land). Most BLM lands are located in the western portion of the County. According the Comprehensive Plan Inventory for the City Las Cruces and Doña Ana County (CPI_CLC-DAC) [10], The BLM is planning

[10] Peter J. Smith & Company, Inc., 2009, *Comprehensive Plan Inventory for the City of Las Cruces and Doña Ana County.*

to dispose of some land on the eastern side of the Rio Grande. It is also planning to consolidate resources on the west side of the Rio Grande by exchanging properties with the State of New Mexico.

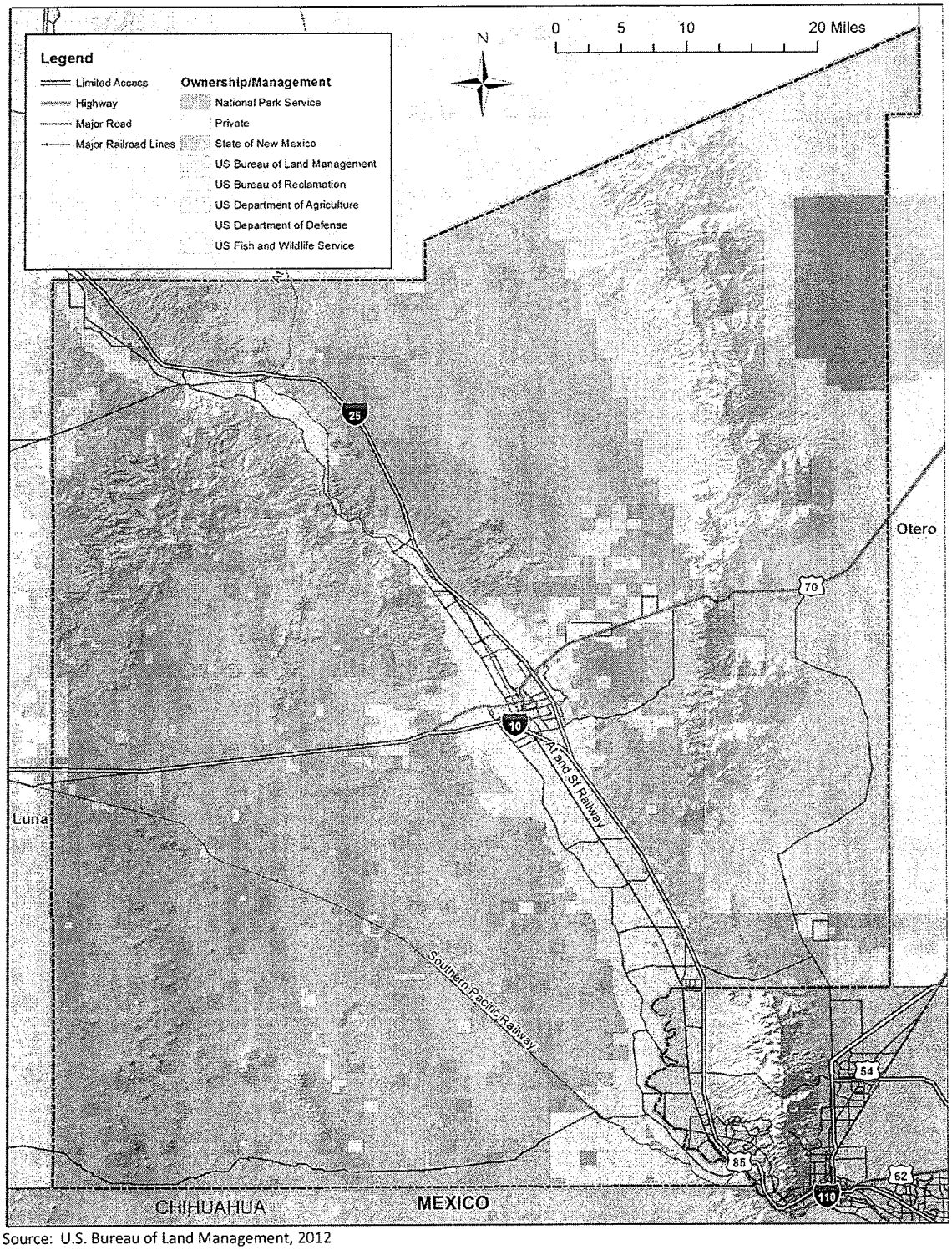
- **U.S. Department of Defense (DOD)** – the DOD owns and/or manages approximately 766.8 square miles of land (20.1% of Doña Ana County). The lands comprise a portion of the White Sands Missile Range and Fort Bliss Military Reservation located on the eastern side of the County. This land is not available for private ownership.
- **State of New Mexico** – the State of New Mexico, through the State Land Trust, New Mexico State University, New Mexico State Park, owns and manages over 451.2 square miles of land (11.8% of Doña Ana County). State Trust lands were allocated when the State of New Mexico was formed, and proceeds from the sale or lease of State Trust land must be used for education or public services. The Chihuahuan Desert Rangeland Research Center (CDRRC), located north and a little west of the City of Las Cruces on the eastern side of the Rio Grande, is the largest consolidated area of State owned land. The CDRRC and other NMSU properties comprise a significant portion of the State owned land within the County.
- **U.S. Department of Agriculture (USDA)** – the USDA owns 171 square miles of land (4.5% of Doña Ana County) north of Las Cruces and west of the White Sands Missile Range. The land is preserved and used for research by NMSU in conjunction with the CDRRC.

Other federal agencies having minor land ownership footprints within the County include the Fish & Wildlife Service (2.3%), National Parks Service (2.1%), and the U.S. Bureau of Reclamation (0.03%). Private land ownership of Doña Ana County is estimated at 13.4%, and is mostly located along the Rio Grande and near or within metropolitan areas.

1.5.8 Unincorporated Area Growth Trends

The primary areas of growth, past and future, will be the five-mile Extra-Territorial Zone (ETZ) of the City of Las Cruces and Doña Ana County. The development trends of the past five (5) years have been predominately within the Extra-Territorial Zone. This is the most desirable properties for development due in part to the availability of infrastructure provided by the City such as water, wastewater, and transportation. Development throughout the remaining region of Doña Ana County has seen a sharp drop in land use activity and subdivisions.

In the next five (5) years, the majority of future growth will once again be tied to the ETZ transitional area. The southern part of Doña Ana County will also experience rapid growth. The part of the County north of Hill, New Mexico, remains primarily rural and agricultural in nature. Population growth is expected to continue at a rapid pace over the next 20 years. The average annual rate is projected to be in the 4-6 percent range, with a 2015 population projected at approximately 240,000 people. The County has plans for future transportation improvements which at times is guided by the Las Cruces Metropolitan Planning Organization (MPO) Functional Classification and Proposed Thoroughfares Plan. This Plan proposes future roadway extensions and proposed roadway locations. It also provides classification for roadways, such as Principal Arterials, Collectors, and Limited Access.



Source: U.S. Bureau of Land Management, 2012

Figure 1-10
Land Ownership/Management within Doña Ana County

1.6 Jurisdictional Overviews

The following are brief overviews for each of the participating jurisdictions in the Plan.

1.6.1 City of Anthony

History – In 1853, the Gadsden Purchase added a strip of land to the southern U.S., and the eastern most portion included the Mesilla Valley and the land currently occupied by the City of Anthony. According to an article written by Ms. Phyllis Eileen Banks for the SouthernNewMexico.com website, Anthony's "early center of commerce developed around a flour mill located about 1/2 mile north of the state line and slightly east of where the railroad now runs. Farmers would visit and conduct business when they brought grain to the mill to be ground."[11] Anthony was also once called Halfway House, since it was half way between Las Cruces, NM and El Paso, TX. The city is also located on the historic Butterfield Trail and was a regular stop for the Butterfield Stagecoach. When the Atchison, Topeka & Santa Fe Railroad established a station at La Tuna, just south of the New Mexico in 1881, Anthony grew even more. The population of Anthony (as a census CDP) grew by over 325% from 1980 to 2010. Anthony officially incorporated July 1, 2010 and is the newest incorporated community within Doña Ana County.

Geography – The City of Anthony is located at the southeastern end of Doña Ana County. At an elevation of 3,802 feet, the city is located on the New Mexico/Texas state line in the Upper Mesilla Valley. The City occupies approximately 2.7 square miles of land with its geographic centroid at latitude 32.01 degrees north, longitude 106.60 degrees west. Interstate 10 runs north and south through the eastern portion of Anthony and the I-25/I-10 junction is located approximately 20 miles north at Las Cruces. The Burlington Northern Santa Fe Railroad also passes through the City on a north-south alignment through the western edge adjacent to State Road 478.

Anthony Wash Arroyo enters and exits the City at the far southeastern corner. The Rio Grande is located west of Anthony at the heart of the Mesilla Valley. No other major watercourses are located in the City.

Most of the land within the City boundaries is privately held, except for a few small County and Gadsden School District owned parcels.

Economy – Anthony's location along current and historic trade routes between Las Cruces, NM and El Paso, TX, makes the community an ideal home for service industries and retail sales that are patronized by traffic along I-10 and the local resident population. There are also several business parks within the City and Doña Ana Community College (in association with NMSU) also maintains a campus just outside the Anthony city limits.

Growth Trends – Prior to incorporation, the area that is now the City of Anthony was one of several colonias identified for New Mexico. According to the Doña Ana County Comprehensive Plan[12], the 1990 housing unit count for the Anthony CDP was 1,362. In 2010, the Census estimate of housing units for the Anthony CDP is 2,586, which is nearly a

[11] URL at: http://southernnewmexico.com/Articles/Southwest/Dona_Ana/Anthony/AnthonySanMiguelLaMesaCha.html

[12] *Doña Ana County*, 1994, *Comprehensive Plan For Doña Ana County*

doubling of the 1990 estimate. Over 30% of the 2010 units are mobile homes and over half of detached single family units.

Anticipated growth trends over the next five years are primarily expected to occur in the northwest portion of the city in the single family and commercial sectors as illustrated in Figure 1-11.

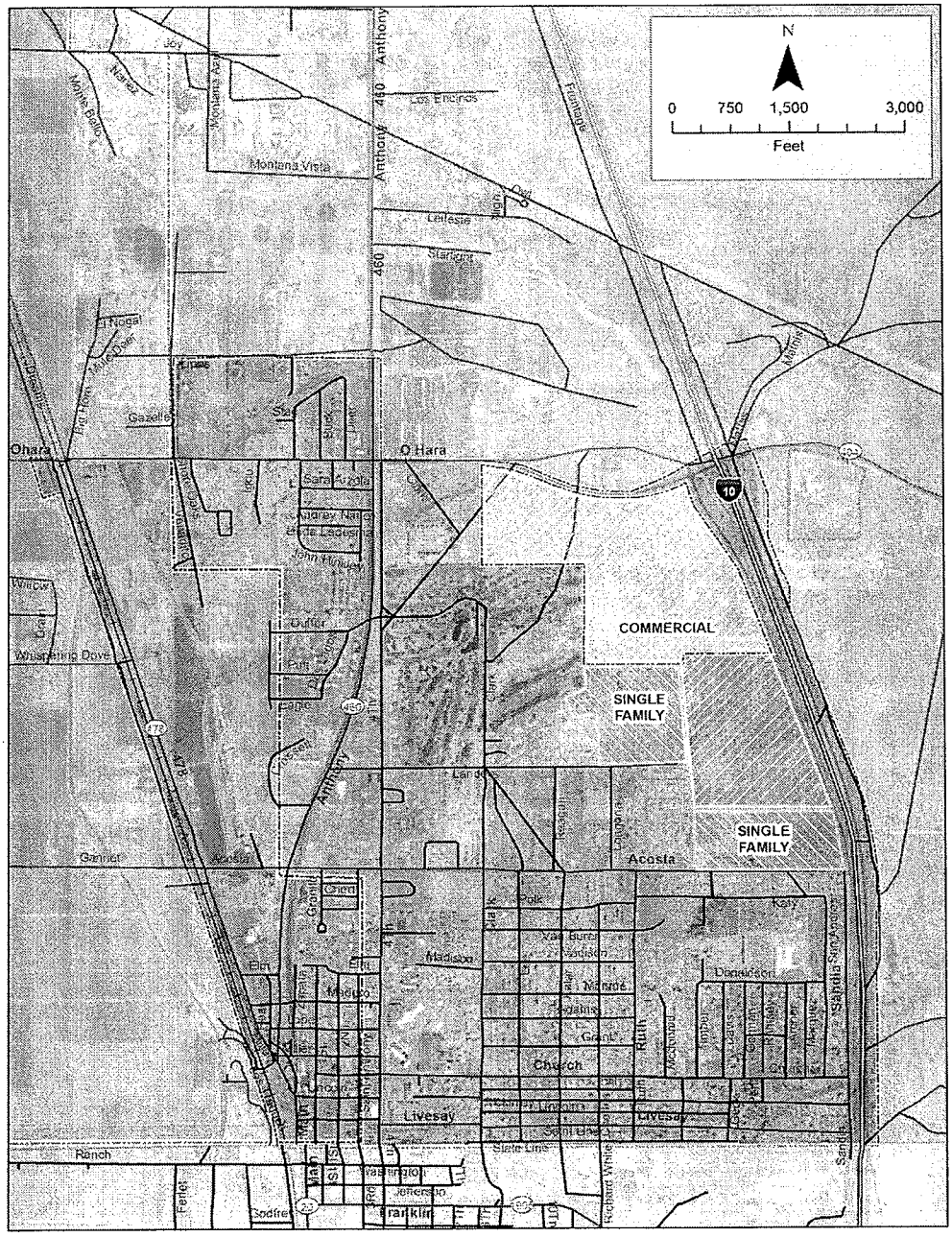


Figure 1-11
Anticipated Future Growth Areas for the City of Anthony

1.6.2 Elephant Butte Irrigation District

The following descriptions are taken from materials published by the Elephant Butte Irrigation District (EBID) on their website[13].

History – On December 22, 1904, the Elephant Butte Water Users Association was formed to provide for and distribute to the lands of the holders of shares of the association an adequate supply of water for the irrigation of members lands. The Association was formed to enter into any contract with the United States Government to acquire and construct necessary facilities. The ownership of a share of stock in the Association carried with it the right to have delivered a proportionate amount of all stored and developed water. The Rio Grande Project was authorized on February 25, 1905, as a Bureau of Reclamation Project, under the authority of the Reclamation Act of 1902, to construct a dam on the Rio Grande as part of a general system of irrigation. On June 27, 1906, the Elephant Butte Water Users Association and the El Paso Valley Water Users Association entered into a "Construction Contract" with the United States. This contract obligated the individual shareholders to pay for the construction of the irrigation works of the Rio Grande Project, and also to pay the costs of yearly maintenance and operation. The 1906 contract recognized that the rights to the use of water from the proposed irrigation works would be appurtenant to the designated lands owned by the shareholders. On June 15, 1918, Elephant Butte Irrigation District, Elephant Butte Water Users Association, and the United States of America entered into a contract to dissolve the Water Users Association and transfer all of the liabilities, benefits, rights and privileges, and project revenues solely to Elephant Butte Irrigation District (EBID). The initial function of the EBID was to collect revenues from area surface water users to repay the debt owed to the federal government for the construction of the EBID's irrigation and drainage system. In addition, the EBID handled relations between area surface water users and the Bureau of Reclamation. All operation and maintenance remained under the control of the Bureau of Reclamation until the EBID had repaid the construction debt in 1971. Negotiations then began which detailed and resulted in the transfer of the operation and maintenance from the Bureau of Reclamation to the EBID. In 1992 the EBID received a deed turning over title and ownership to the canals, laterals, and drains to the EBID.

Historically, water distributed by the Elephant Butte Irrigation District has been used for agricultural purposes. As irrigated land has been converted to urban development, the water associated with it has been reassigned to other qualified land within the EBID. The EBID has resisted pressure to convert the associated water to nonagricultural uses because the agricultural demand remains. However, the EBID also understands that it must address these water management issues with creative thinking and a willingness to address the demands for regional solutions.

EBID is a quasi-municipal entity of the state of New Mexico. The district operates under New Mexico statutes §73-10-1 through §73-10-47 Irrigation District Cooperating with United States under Reclamation Laws; Formation and Management, and §73-11-1 through §73-11-55 Irrigation Districts Cooperating with United States under Reclamation Laws; Fiscal Affairs; Local Improvements and Special Powers. A nine-member board of directors manages EBID.

[13] Website URL at: http://www.ebid-nm.org/general/About_EBID/index.shtml

Each member is elected for a two-year term and represents one of Doña Ana County's nine city polling precincts. The board hires a treasurer/manager to oversee EBID's daily operations and carry out the board's directives. EBID functions are broken down into five major departments: operations, maintenance, general/administration, hydrology and engineering. The operations department is in charge of ordering and scheduling water. Maintenance maintains the canals, laterals and ditches owned and used by EBID to deliver water. Administration follows the board's directives and controls the accounting and billing. Hydrology communicates with the Bureau of Reclamation and EBID's water master for diversions of water. Hydrology's main operation is to measure and control the flow of water along the canal system. Engineering is responsible for any issues dealing with water-righted lands. This department works closely with the State Engineers office to help water-righted owners with any water rights under adjudication in the Lower Rio Grande Stream Adjudication.[14]

Geography – In general, the EBID boundaries straddle the Rio Grande from approximately two miles downstream of the Caballo Dam to just north of the New Mexico – Texas state line. There are 90,640 acres of land within the EBID boundaries that have authorized water rights, with an estimated 7,900 water users. The Rio Grande Project covers 130 miles of land located in the Lower Rio Grande Basin from Caballo Dam to El Paso, Texas.[15]

There are five dams on the Rio Grande that service the EBID, described as follows:

Elephant Butte Dam, Reservoir, and Power Plant – Elephant Butte Dam and Reservoir (originally called Engle Dam) are located 125 miles north of El Paso, Texas. Elephant Butte Dam is operated and maintained by the U.S. Bureau of Reclamation and can store 2,210,298 acre-feet of water, providing irrigation water and year round power generation. The dam is a concrete gravity structure 301 feet high and 1,674 feet long, including the spillway, and was completed in 1916. The power generation system at Elephant Butte consists of a 24,300-kilowatt hydroelectric power plant. The power system consists of 490 miles of 115-kilowatt transmission and 11 substations with a total of 81,750 kilo-amperes. The power station was developed and operated by the Rio Grande Project until 1977, after which it was sold to a private electric company.

Caballo Dam and Reservoir – Caballo Dam and Reservoir are operated and maintained by the U.S. Bureau of Reclamation and are located on the Rio Grande, 25 miles downstream from Elephant Butte Dam. The dam is an earth fill structure 96 feet high and 4,590 feet long, with a storage capacity of 343,990 acre-feet. Water discharged from Elephant Butte Dam Powerplant during winter power generation is impounded at Caballo Dam for irrigation use during the summer.

Percha Diversion Dam and Canal System – Percha Diversion Dam is 2 miles downstream from Caballo Dam. It diverts water into the Rincon Valley Main Canal. The dam is a concrete ogee weir with embankment wings and two 20-foot river gates. The Rincon Valley Main Canal, which carries water for the irrigation of 16,260 acres in the Rincon

[14] DeMouche. Leeann, 2004, *Interpreting the Elephant Butte Irrigation District for Water Users*, Cooperative Extension Service • Circular 590, New Mexico State University, Cooperative Extension Service, Extension Plant Sciences Department.

[15] Ibid

Valley, is 28.1 miles long and has an initial capacity of 350 cubic feet per second. The canal crosses under the Rio Grande at the Garfield, Hatch and Rincon Siphons.

Leasburg Diversion Dam and Canal System – The Leasburg Diversion Dam is located 62 miles north of El Paso, Texas, at the head of the Mesilla Valley, and is a concrete ogee weir with embankment wings and three river gates. This structure diverts water into the Leasburg Canal for the upper 31,600 acres of the Mesilla Valley irrigation system. The Leasburg Canal, which conveys irrigation water to the Mesilla Valley, is 13.7 miles long and has an initial capacity of 625 cubic feet per second.

Mesilla Diversion Dam and Canal System – The Mesilla Diversion Dam is located 40 miles north of El Paso, Texas and is a low concrete weir, radial gate structure that is 22 feet high and flanked by levees. This structure diverts water into the East Side and West Side Canals for the lower 53,650 acres of the Mesilla Valley irrigation system. The East Side Canal is 13.5 miles long and has an initial capacity of 300 cubic feet per second. The West Side Canal is 23.5 miles long and has an initial capacity of 650 cubic feet per second. Near its terminus, the West Side Canal system crosses under the Rio Grande in the Montoya Siphon.

Water delivery to constituents from the over 375 miles of canals and laterals is accomplished through ten irrigation units consisting of three ditch riders each. An additional 275 miles of drains and wasteways complete the EBID system. The canals, laterals, drains and wasteways that make up the District's irrigation system are maintained almost entirely by the EBID. A large maintenance section keeps the facilities in working order throughout the water season. During the 2 ½ to 3 month winter maintenance season, all major and/or minor structure repairs are made, as well as all new constructions such as turn-out installations.

The EBID maintains a vast network of radio telemetry units (RTUs) that constantly monitor the Rio Grande Stations, headings, checks, farm turnouts, and irrigation wells. The data for most of the RTUs can be accessed via the Water Resource Information System (WRIS) Data Center on the EBID website. The purpose of the system is primarily for monitoring of the EBID system. Providing public access to the reported data brings transparency to the EBID radio telemetry program and provides useful information to farmers, local and state government officials, and the public at large.

Economy - The EBID Board of Directors sets the yearly charges for water right holders. Assessments are levied on lands that are capable of receiving water through EBID's water delivery system. Assessments are broken down into three basic charges: general, operating and maintenance (O&M) and reservoir fee. There can be additional charges listed on the bill for administrative, reclassification and local improvement district (LID).

Growth Trends – EBID's capacity for growth is strictly limited to the water rights laws and operational limitations set forth in the governance statutes under which the EBID was formed. Accordingly, there is no opportunity for expansion of service areas or growth in a traditional sense. Most of EBID efforts are currently focused on flood control issues relating to storm water management and dam failure protection. In specific, EBID is:

- Regularly maintaining 27 Flood Control dams in EBID boundaries with hope to refurbish and upgrade.

- Installing weather stations in some of the larger watersheds impacting EBID facilities throughout Doña Ana County and instrumenting EBID rain gauges throughout the valley.
- Installing metering devices on selected arroyos to measure flood flows.
- Enlarging EBID drainage system to capture flood flow run off.
- Building drainage retention sites to allow for capture of flood flows for eventual recharge to the aquifer and possibly using water for irrigation purpose.

These efforts are continuing and will be expanded as funds become available within the next five years.

1.6.3 Village of Hatch

History – According to the Village of Hatch Comprehensive Plan[16], the Village of Hatch's beginnings are tied to the completion of the Santa Fe Railroad line between Deming and Rincon around 1880. The Village was presumably named after General Edward Hatch, a U.S. Army officer who had visited the region earlier. In 1911, the official townsite was surveyed and laid out with many additions to the growing community. The construction of Elephant Butte Dam and the formation of EBID in 1917 brought an assured water supply to area farmers and a boost to the economy of Hatch. Huge floods in 1921, 1926 and 1935 caused major damage and devastation to the area, but each time, Hatch would rebuild and continue to grow. The Village of Hatch was incorporated in 1927 with a population of about 300 residents.

Geography – The Village of Hatch is located at the northwest corner of Doña Ana County. At an elevation of 4,057 feet, the Village is located along the west/south bank of the Rio Grande approximately 33 miles northwest of Las Cruces, New Mexico. The Village occupies approximately 3.3 square miles of land with its geographic centroid at latitude 32.66 degrees north, longitude 107.16 degrees west. Interstate 25 is located north of the Village and several state highways pass through the Village including Highways 26, 154, 185, 187, and 543. The Burlington Northern Santa Fe Railroad also passes through the Village running on an east-west alignment through the southern portion.

The majority of Hatch is located within the geologic floodplain of the Rio Grande. Several arroyos and other small ephemeral drainages pass through Hatch on their course to the Rio Grande, including Spring Canyon and Placitas Arroyos. The Rio Grande is located along the north boundary of Hatch.

Most of the land within the Village boundaries is privately held (81%). The next largest land owner is the BLM, which holds a significant portion of the western annex.

Economy – Hatch is known as the "Chile Capital of the World" and agriculture will always be a strong component of the local economy. Other elements include manufacturing with metal fabrication and machining, and tourism. Hatch is the home of the NextEra Energy Resources' Hatch Solar Energy Center I, which generates 5.1 MW of solar derived electrical power. In February 2012, the New Mexico Spaceport Authority announced plans to locate one of two off-site welcome centers in the Village of Hatch.[17]

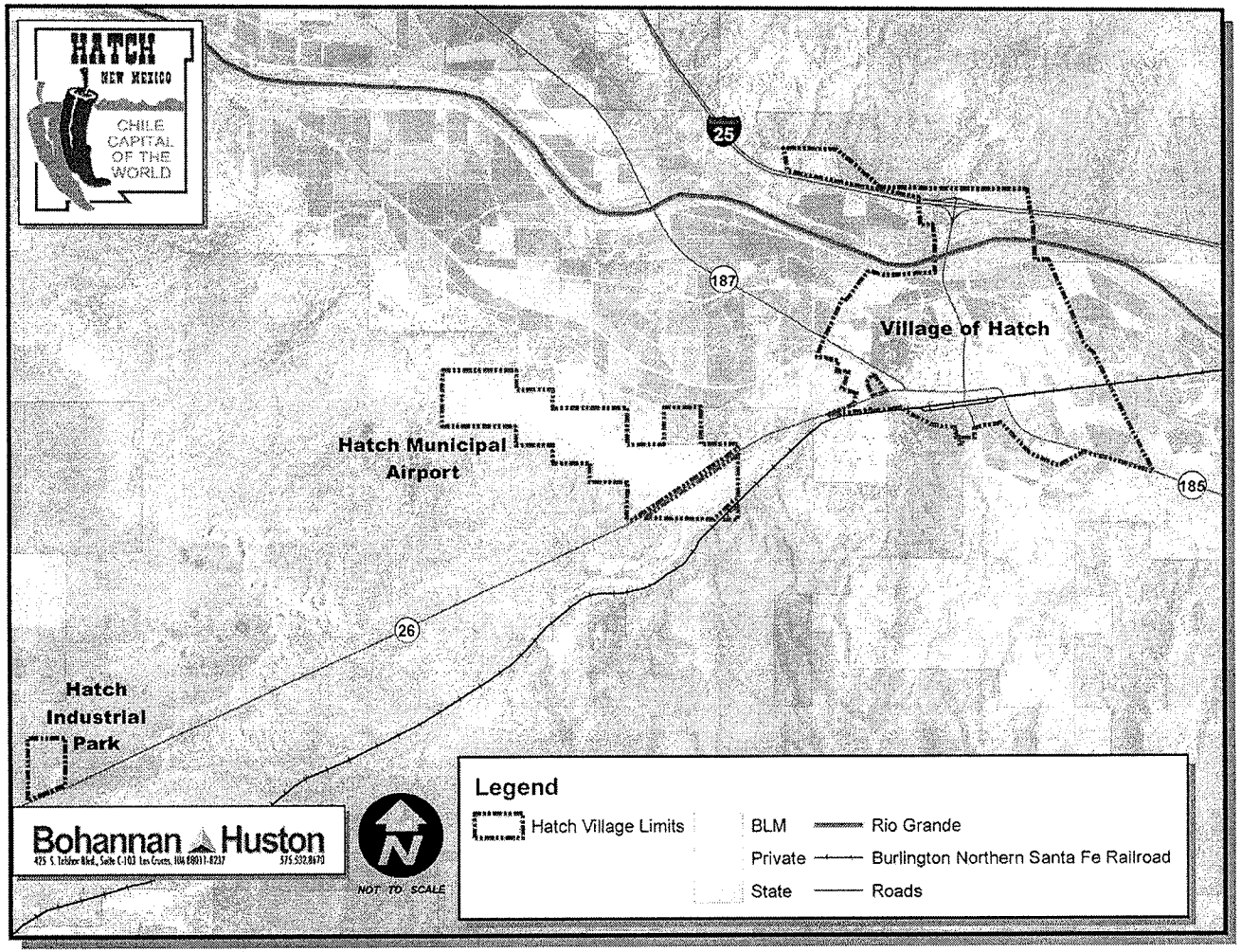
Growth Trends – Commercial and residential development over the last five years has essentially stabilized and in a sense was considered a recovery process for the community as a result of the summer floods of 2006. Not long after, the community was also impacted by the 2007-2008 economic crises. Development within the Village of Hatch has been limited to a few commercial businesses and some significant improvements to infrastructure. The majority of the commercial improvements were located within the center of town, primarily along Highway 185. Improvements to infrastructure included resurfacing/rebuilding the roadways following new water and gas line replacement projects. Major roadway reconstruction throughout the Village of Hatch was completed in 2008. In 2009-2010, the

[16] Sites Southwest LLC, 2003, *Village of Hatch Comprehensive Plan*

[17] Hobbyspace.com webpage at the following URL: http://hobbyspace.com/nucleus/index.php?itemid=35502

New Mexico State Department of Transportation reconstructed the bridge crossing along Highway 187 across the Placitas Arroyo. In 2011-2012, an annexation of over 300 acres north of Hatch, adjacent to Interstate 25 and Highway 26 (Franklin Street), was enacted with the intent to provide added capacity for future commercial facilities. Figure 1-12 depicts the village boundaries and key development locations.

It is expected that in the next five years, as funding becomes available, the Village of Hatch and selected organizations will continue to work together to improve and expand on the facilities necessary to maintain the quality of life and promote economic growth. These facilities would include the overall water system, sanitary sewer collection and treatment system, transportation, and the mitigation of local storm water runoff and offsite drainage. It is expected that within the next five years the Village of Hatch will construct a new water well with the intent to augment the community's domestic water system. Efforts are currently underway to complete the upgrade to the existing waste water treatment system. The Village is also strongly encouraging discussions with other local jurisdictions regarding the implementation of a drainage master plan for the Village of Hatch, to control and mitigate storm water runoff conditions. In addition, the US Army Corp of Engineers continues to move forward with the design and construction of the North Spring Dam, which is to be located south of the Village of Hatch.



Source: Village of Hatch via Bohannan-Huston, Inc., 2012

Figure 1-12
Key Growth Areas for the Village of Hatch

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1.6.4 *City of Las Cruces*

History –The Las Cruces area had long been occupied by Native American groups, Spanish explorers, and Mexican colonists. Over the years, wars and international treaties have changed control of the area several times, with Spain, Mexico, the Confederacy, and ultimately the United States each taking a turn.[18] The City's name, Las Cruces, was inspired by a stand of crosses marking the graves of travelers and soldiers that lay six miles south of Doña Ana.

In 1849, U.S. Army surveyors lead by Lieutenant Delos Bennett Sackett, divided Las Cruces into 84 blocks. Located on a major trade route dating back to the Camino Real, Las Cruces supported an array of businesses and many adobe homes were constructed to house the resident community. In 1881 the Atchison Topeka & Santa Fe Railroad steamed into Las Cruces and influenced every aspect of life in the City. In 1916, the construction of Elephant Butte Dam and formation of the EBID, brought a more consistent and reliable supply of irrigation water to the Mesilla Valley and many farms were started or expanded in the Las Cruces area. From 1950 to 1960, the population of Las Cruces grew from 12,000 to more than 29,000, with much of the growth attributed to the establishment of the White Sands Proving Ground and NASA Research Facilities. Around the same time, City leaders adopted an Urban Renewal Program for downtown, which closed several blocks of Main Street and created a walking mall. Many new houses were built as land was developed on the east Mesa.

Las Cruces serves as the Doña Ana County seat and was initially incorporated as a town in 1907 and later becoming a city in 1946.

Geography – The City of Las Cruces is located at the heart of Doña Ana County in the Mesilla Valley. At an average elevation of 3,908 feet, the City is bisected by the Rio Grande and is situated approximately 42 miles north and a little west of El Paso, Texas. The Organ Mountains rise ruggedly east of the City providing a picturesque vista from any point within the City. The City occupies approximately 77.0 square miles of land with its geographic centroid at latitude 32.32 degrees north, longitude 106.77 degrees west. Interstates 10 and 25 both pass through the City and their interchange is located at the southeastern tip of the City. US Highway 70, which was the primary thoroughfare prior to the construction of the freeways, passes through the heart of Las Cruces. There are also several state highways that pass through the City. The Burlington Northern Santa Fe Railroad also passes through the heart of the City on a general north-south alignment.

Much of the City west of I-25 is located within the geologic floodplain of the Rio Grande. Several arroyos and other ephemeral drainages drain onto or through the City on their course to the Rio Grande, including Alameda, Las Cruces, Nafzinger, North Fork Las Cruces, North Fork Tortugas, North Moreno, Sandhill, South Fork Las Cruces, South Fork Tortugas, South Moreno, and Tortugas Arroyos.

In the City of Las Cruces, 65.5% of the land is privately owned. The State manages 23.4% of the land and the BLM manages 10.9%. Most of the Land managed by the State and BLM are

[18] URL at: http://www.las-cruces.org/code/history_exhibit/index.html

located in the more recent annexations, and on the east side, much of this land has already been master planned for development and is expected to eventually be transferred to private ownership.

Economy – As indicated by Table 1-3, the City of Las Cruces is the economic heart and engine of Doña Ana County, with just under 70% of all Doña Ana County 2011 gross receipts. Major employers located within the City include Las Cruces Public Schools, the City itself, Memorial Medical Center, Wal-Mart, Convergys, Doña Ana County, Santillan Plumbing, Sitel, and Tresco, Inc.[19] The top producing industries for the City were retail and wholesale trade, healthcare and social assistance, construction, manufacturing, and professional, scientific and technical services. As of June 2010, the unemployment rate for the Las Cruces, NM MSA was 8.2%.

Growth Trends – The 2007-2012 residential/commercial growth for the City of Las Cruces was generally east and north of Interstate 25. This has mostly been the growth pattern over the past couple decades. During 2007-2012, the city added approximately 3,000 new lots. This included large planned area developments such as Sierra Norte and Vistas at Presidio located east of Interstate 25. There were about 2,600 lots (86 percent) added in the area east and north of Interstate 25, as displayed in Figure 1-13. However, residential and commercial growth has occurred and will continue within the city limits west of Interstate 25 supported by adopted city plans and policies that encourage the redevelopment of land within its present urban area. The OVOV 2040's Consensus Growth Strategy encourages new growth toward existing urban areas, as exhibited in Figure 1-14. Goal 6-1-6 of the OVOV 2040 encourages *"development where adequate facilities and services exist or can be provided in an efficient manner."* Furthermore, the City has a designated infill area that promotes additional housing and non-residential uses within areas of the city limits already served by infrastructure. This infrastructure includes utilities, roadways, transit, and public facilities. The City infill area is generally bounded by Interstate 25 on the east, University Avenue on the south, Valley Drive from University Avenue to Hoagland Road on the west and Hoagland Road/Three Crosses/Main Street on the north.

The 2007-2012 industrial growth occurred in designated industrial zoning districts found on the west portion of the city limits, generally bounded by Valley Drive to the east, Picacho Avenue to the north, Interstate 10 to the south, and the Las Cruces Airport to the west. Most of the growth during this period was the result of a 2007 annexation around the Las Cruces Airport of approximately 8,400 acres of undeveloped land designated predominately for industrial uses.

The City is beginning the process to update its 1999 comprehensive plan, which will look at trend data in greater detail. Based on available information, the projected 2012-2017 trend for development growth within the city limits will likely continue toward the same areas as it occurred during 2007-2012. As part of the OVOV 2040 process, there was a preliminary current trend 2040 build out projection prepared for the City of Las Cruces[20], which is shown in Figure 1-15.

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[19] Mesilla Valley Economic Development Alliance, 2011, *Regional Profile for Las Cruces NM MSA – 1st Quarter 2011.*

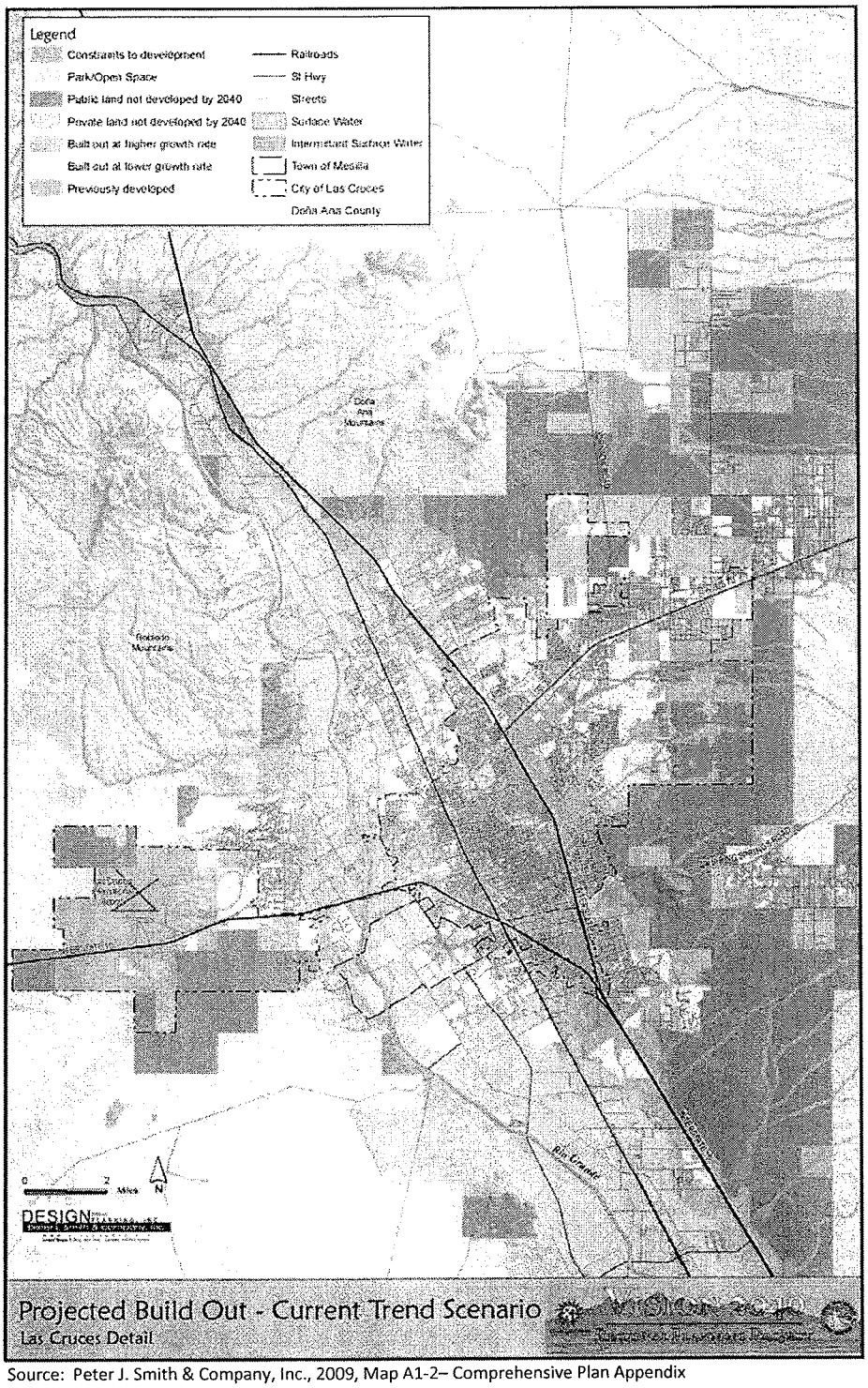
[20] Peter J. Smith & Company, Inc., 2009, *Comprehensive Plan Appendix for the City of Las Cruces and Doña Ana County,* Figure A1-2

Source: City of Las Cruces, 2012

Figure 1-13
2007-2012 Growth Areas for the City of Las Cruces

Source: Map 11 – Consensus Growth Strategy, OVOV 2040

Figure 1-14
OVOV 2040 Census Growth Strategy for the City of Las Cruces



Source: Peter J. Smith & Company, Inc., 2009, Map A1-2– Comprehensive Plan Appendix

Figure 1-15
Future Growth Areas for the City of Las Cruces

This preliminary projection indicates continued residential and commercial growth for the City to be generally east and north of Interstate 25. Two assumptions that support this continued pattern of growth are:

1) The City has approximately 30,700 acres of undeveloped/vacant land (approximately 62 percent of the total land within city limits) that lies north and east of Interstate 25, and,

2) Many of the 3,000 lots platted and developed over the past five years are currently vacant and will require minimal effort to obtain a building permit, as opposed to processing a new development requiring zoning and master plan approval. However, this eastward growth will be offset by city strategies on creating multimodal opportunities and encouraging new growth toward the existing urban area and adjacent to transit.

1.6.5 Town of Mesilla

History – The following is excerpted from the Town's comprehensive plan:[21]

In the 1800's, Mesilla was a stopping off point along the Camino Real and the Butterfield Trail-truly at the crossroads of commerce and activity. After the treaty of Guadalupe Hidalgo in 1848, the town was an established colony. The peace treaty ceded land from Mexico to the United States to form what is California, Arizona, New Mexico, Texas, and portions of Colorado, Nevada and Utah. Located near Fort Fillmore, Mesilla was a supply center providing goods and services to the troops. The town flourished, despite the fact that it was located between the boundary lines of Mexico and the United States. In fact, residents living north of the town moved to Mesilla to remain in Mexico, however, with the Gadsden Purchase resolving the boundary dispute, Mesilla officially became part of the United States.

Incorporated in 1861, commerce in Mesilla thrived and the town, being the County Seat, enjoyed the activity resulting from its location along the major east/west and north/south trails. A bustling center, the Mesilla plaza played host to dances, bullfights, and other more politicized events, like the trial of Billy the Kid. The courthouse off the plaza still stands today, with a plaque describing the events of Billy the Kid in Mesilla. Activity slowed when Mesilla lost its position as County Seat with the 1881 arrival of the railroad in neighboring Las Cruces. This event, according to some, was a blessing in disguise that resulted in the preservation of the town's unique architectural style and charm. In 1958, Mesilla re-incorporated and changed to being governed by a mayor and Board of Trustees.

Geography – The Town of Mesilla is located in central Doña Ana County. At an elevation of 3,881 feet, the Town is located along the Rio Grande and shares a common boundary with the City of Las Cruces along the Town's northeastern boundary. The Town occupies approximately 5.6 square miles of land with its geographic centroid at latitude 32.27 degrees north, longitude 106.80 degrees west. Interstate 10 is located just north of the Town and the larger north-south roadways include NM State Road 28 (Avenida de Mesilla), NM State Road 292, Snow Road (NM 372), and South Fairacres Road. The larger east west roadways include Glass Road, Calle Del Norte (NM 359), University Avenue (NM 101), Union Avenue (NM 373) and Boutz Road. The Burlington Northern Santa Fe Railroad passes just east of the Town on a general north-south alignment.

All of Mesilla is located within the geologic floodplain of the Rio Grande and the Rio Grande corridor is the only major watercourse through the Town. Several small ephemeral arroyos drain into the Town from the mesa area located west of the Town boundary, and are intercepted in basins and irrigation drains and eventually discharged back into the Rio Grande.

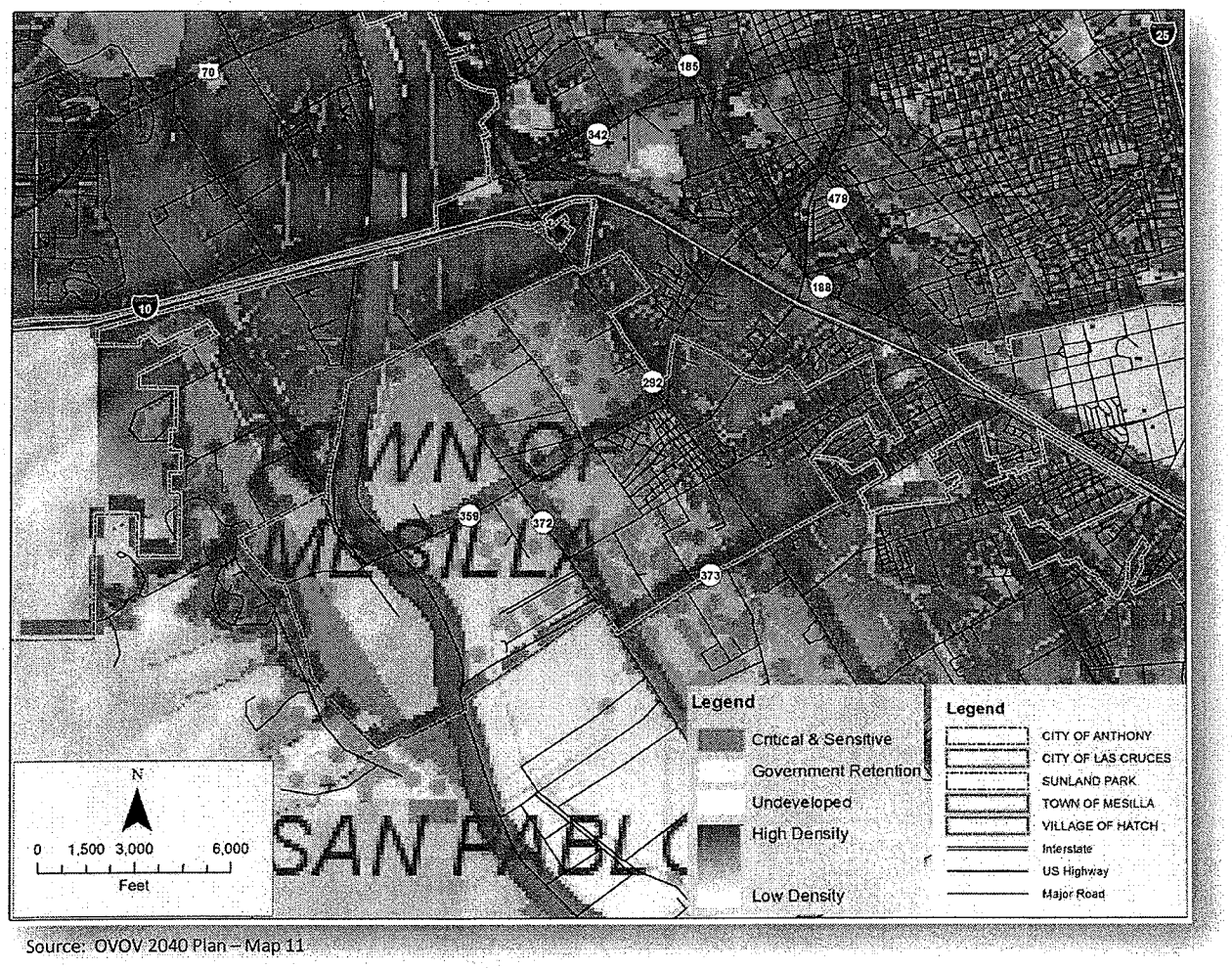
According to BLM, all of the land within the Town boundary is privately held except an 180 acre New Mexico State Park parcel.

Economy – As indicated by Table 1-3, the primary economic sectors within the Town of Mesilla are accommodation and food services and retail trade. The Town plaza is the primary employment center and includes a mix of restaurants, small scale retail, coffee

[21] Town of Mesilla, 2004, *Town of Mesilla Comprehensive Plan 2004*

shops, a book store and several artisan shops. Agricultural activities also provide employment opportunities and economic income to Mesilla.

Growth Trends – The Town of Mesilla has experienced very little growth in last five years and based on the past trends, very little growth is anticipated through 2040 as illustrated by Figure 1-16 below taken from the OVOV 2040 Plan. The control of growth is attributed to the Town's zoning and purposeful preservation of the large lot residential and agricultural areas, which comprise over 80% of land use within the Town.



Source: OVOV 2040 Plan – Map 11

Figure 1-16
Trend-Based Growth Projection for the Town of Mesilla

1.6.6 New Mexico State University

History – The following is excerpted from the New Mexico State University (NMSU) website:[22]

New Mexico was still a territory when Las Cruces College opened the doors of its two-room building in the fall of 1888. The organizers of Las Cruces College—led by Hiram Hadley, a respected educator from Indiana—had even bigger plans in mind. In 1889, the New Mexico territorial legislature authorized the creation of an agricultural college and experiment station in or near Las Cruces. The institution, which was designated as the land-grant college for New Mexico under the Morrill Act, was named the New Mexico College of Agriculture and Mechanic Arts. Las Cruces College merged with N.M.A.&M.A., and the new school opened on January 21, 1890. That first semester there were 35 students in the college level and preparatory classes and six faculty members. Classes met in the old two-room building of Las Cruces College until suitable buildings could be put on the 220-acre campus three miles south of Las Cruces. By 1960, the school had grown greatly, and its name was changed by state constitutional amendment to New Mexico State University.

Geography – NMSU provides learning opportunities to a diverse population of students and community members at five campuses, a satellite learning center in Albuquerque, cooperative extension offices located in each of New Mexico's 33 counties, 13 research and science centers, and through distance education. Doña Ana Community College (DACC) is also part of NMSU and offers several locations throughout the county. Within Doña Ana County, the primary NMSU campus is located in Las Cruces near the junction of Interstates 10 and 25. Other campuses are located in Anthony, Chaparral, Hatch, Las Cruces, and Sunland Park, as well as research sites and facilities scattered across the County.

The Chihuahuan Desert Rangeland Research Center (CDRRC) is part of NMSU and is located north of Las Cruces and west of the Rio Grande near New Mexico State University which is located in Las Cruces, New Mexico. It is a major source of arid lands research in the Department of Animal and Range Sciences, which is part of the College of Agriculture and Home Economics. Established in 1927 to conduct "educational, demonstrative, and experimental development with livestock, grazing methods, and range forage," the CDRRC is administered by the NMSU Board of Regents.

Figure 1-17 shows the various NMSU and DACC campus and CDRRC locations across the County.

Economy – According to the FY2010-2011 annual financial report[23], NMSU had an operational budget of over $560 million. Much of those operational expenses translate into the economy of the Doña Ana County in the form of wages, purchases, and wholesale and retail sales, making NMSU a significant contributor to the economic health of the County.

[22] NMSU website URL at: http://www.nmsu.edu/General/history.html

[23] NMSU, 2011, *2010-2011 Annual Financial Report*

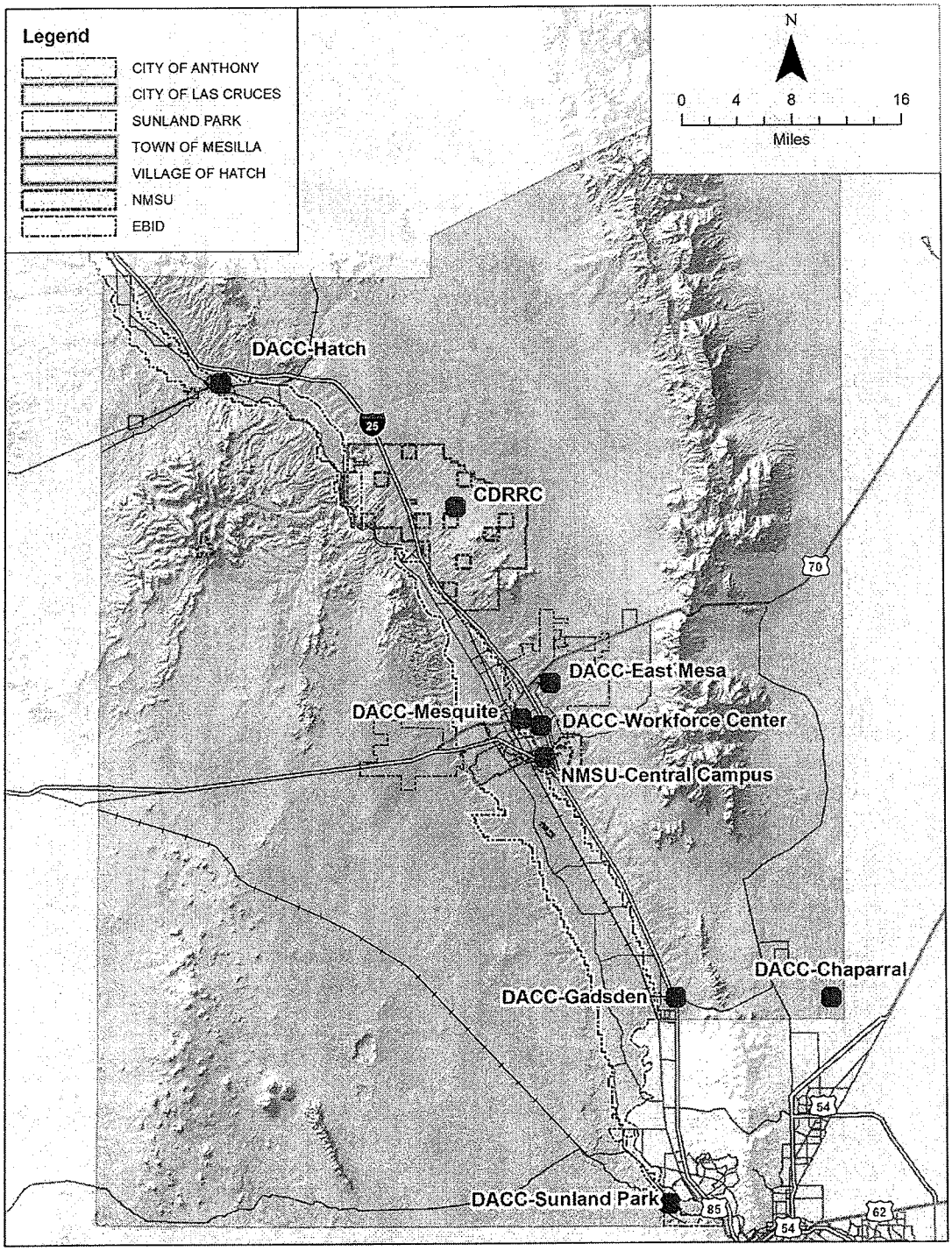


Figure 1-17
NMSU Campus Locations

Growth Trends – The 2006-2016 Master Plan noted that NMSU occupies a singular geographic position in the American West located at the intersection of Interstates 10 and 25. It is strategically located to impact both the state and region as it strives to expand its academic and research programs to become one of the top tier research institutions in the United States. NMSU's mission is to serve "the educational needs of New Mexico's diverse population through comprehensive programs of education, research, extension education, and public service". By the year 2020, NMSU expects to be in the top quartile of its defined peer institution group and expects its student population at the Las Cruces campus to grow to 25,000 head count or 19,500 FTE (fulltime equivalent) within 20 years. The Las Cruces campus current head count for 2011/2012 is 18,024.

The development trends of the past five years have focused on approximately 1.6 million gross square feet of academic/research space; the Performing Arts Complex; expansion of Arrowhead Park which included the development of the Arrowhead Early College High School, and the construction of additional campus housing. Foster Hall and O'Donnell Hall have been remodeled and expanded, the Performing Arts center is under construction, and Chamisa II housing is near completion. Arrowhead Park has seen some expansion in research, although the economy has taken its toll. It is also noted that starting in FY1999, NMSU implemented design standards for parking lots that takes into consideration storm water runoff and includes on-site runoff storage for all new parking lots.

For the next five year period, enrollment growth is anticipated to slow due to the lingering effects of the recession and a reduction of funds available at the state level. Consequently there will be some retrenching in terms of development of the NMSU campus. As a general rule, existing space will be remodeled and renovated while new construction will be limited. The Housing Master Plan calls for one dormitory to be replaced and options to be considered for new family housing. Arrowhead Research Park will continue to showcase NMSU's commitment to advancing research and economic development, and the park will continue to develop new partnerships with the private sector outside the state funding paradigm. Some campus parking lots will be upgraded and consideration for the impact to the environment will be included as part of NMSU's commitment to sustainability.

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1.6.7 City of Sunland Park

History – Sunland Park was originally named Anapra. In 1901-1902, El Paso & Southwestern Railroad constructed a rail line from Douglas Arizona to El Paso Texas. A major portion of this line passed through southern New Mexico and was known as "The Southline". Phelps Dodge utilized this line to ship anodes from its Douglas Smelter to its El Paso Smelter and Refinery Plant. In 1924 Southern Pacific Railroad purchased the El Paso and Southwestern Railroad, and established the Town of Anapra, New Mexico. In 1961, Southern Pacific determined that is was no longer cost effective to operate "The Southline", and abandoned the rail line between Douglas, Arizona and Anapra, New Mexico. The remaining segment of "The Southline" between Anapra and El Paso remains in service today. In 1960, Anapra and other nearby communities changed their collective name to Sunland Park, in support of the Sunland Park Racetrack, which was founded in 1959. The Sunland Park Racetrack was a gateway to the east and west for top racing talents throughout the 1960's and 1970's. The City of Sunland Park was incorporated in 1983. Due to declining industry in the 1990's around the nation, State of New Mexico designed legislation allowing its racetracks to incorporate slot machines into their business as an effort to save horse racing in New Mexico. The Sunland Park Racetrack received its gaming license in 1999, and is now known as the Sunland Park Racetrack and Casino.[24]

Geography – The City of Sunland Park is located at the extreme southern end of Doña Ana County in the Mesilla Valley. The City shares its southern boundary with Chihuahua, Mexico and its eastern boundary with the State of Texas and El Paso. At an average elevation of 3,789 feet, the City is partially bisected by the Rio Grande and is situated approximately 42 miles south and a little east of Las Cruces. Mount Cristo Rey, a prominent landmark that can be seen for several miles, is located at the southern end of the City. The City occupies approximately 12.8 square miles of land with its geographic centroid at latitude 31.81 degrees north, longitude 106.58 degrees west. Interstate 10 is located east of the City and State Highway 273, also known as McNutt Road, passes through then center of the City and terminates at the City's southern end. The Union Pacific Railroad also passes through the southern portion of the City on a general northwest-southeast alignment.

The eastern portion of the City is located within the geologic floodplain of the Rio Grande. Several unnamed arroyos and ephemeral watercourses drain onto or through the City on their course to the Rio Grande.

With the exception of a small parcel of State Trust Land, the entirety of Sunland Park is privately owned.

Economy – As indicated by Table 1-3, the primary economic sectors within the City of Sunland Park are construction, retail trade, health care and social services, utilities, and educational services. The primary economic engine of the City is the Sunland Park Racetrack and Casino. The Santa Teresa Port of Entry and Doña Ana County Airport are other existing economic drivers for the area. The Union Pacific railroad is expanding its operations by

[24] History description provided on the Sunland Park website at: http://www.cospnm.org/home.php

building a new multi-mode railroad hub in Santa Teresa, and is projected to provide Southern New Mexico with a $500 million economic boost.[25]

Growth Trends – Over the past five years, Sunland Park has experienced moderate growth and mostly in the development of residential areas. That trend is expected to continue over the next five years. As a part of this hazard mitigation planning process, the City has identified several key residential development areas that are expected to develop over the next five years, as shown in Figure 1-18.

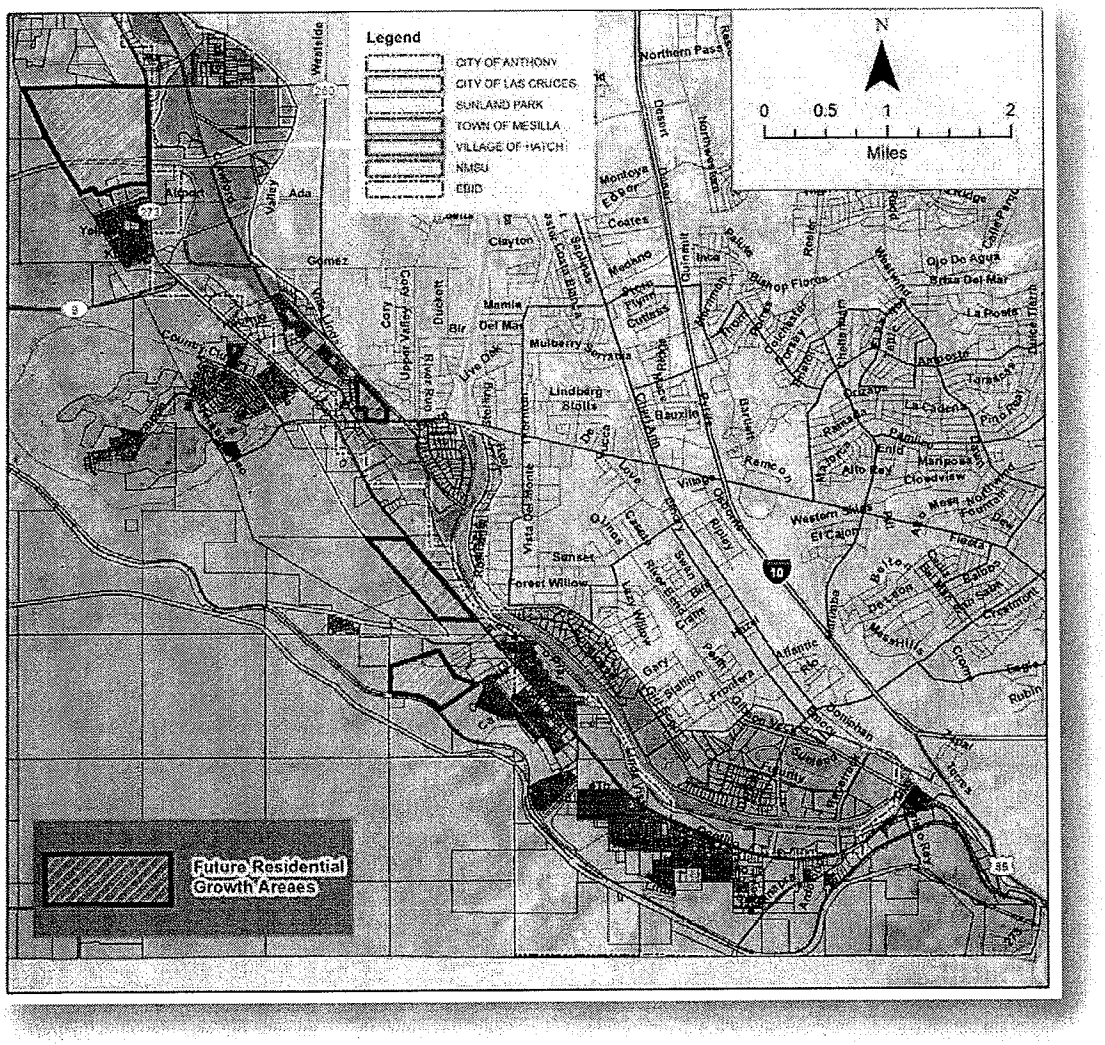


Figure 1-18
Future Residential Growth Areas for the City of Sunland Park

[25] OVOV 2040 Plan.

SECTION 2: PLANNING PROCESS

This section includes the delineation of various DMA 2000 regulatory requirements, as well as the identification of Steering Committee members and other invited stakeholders within Doña Ana County. In addition, the necessary public involvement meetings and actions that were applied to this process are also detailed.

2.1 Planning Process Description

Doña Ana County Flood Commission (DACFC) applied for and received HMGP monies from the presidential disaster declaration FEMA-1783-DR, as a sub-grantee to the State of New Mexico. The funding cost share was 75% federal and 25% local and the monies were used to fund a multi-jurisdictional effort to review and completely revise the 2004 Plan. Once the grant was received, the County initiated a Request For Proposal process and selected Tectonic to work with the participating jurisdictions and guide the planning process. Three new jurisdictions actively participated in the plan update effort and will officially adopt the Plan. An initial project kick-off meeting between DACFC and Tectonic/JEFuller was convened in December 2011 to begin the planning process, outline the plan objectives, outline the anticipating meeting agendas for the planning efforts, and to discuss the new plan format and other administrative tasks. Initial points of contact were also established between DACFC and Tectonic/JEFuller. A total of four Steering Committee meetings were conducted over the period of December 2011 through April 2012, beginning with the first meeting on December 13, 2011. Throughout that period and for several months afterward, all the work required to collect, process, and document updated data and prepare the draft of the Plan was performed. Details regarding key contact information and promulgation authorities, the Steering Committee selection, participation, and activities, and public involvement are discussed in the following sections.

2.2 Previous Planning Process Assessment

The first task of preparation for this Plan, was to evaluate the process used to develop the 2004 Plan. This was initially discussed by DACFC and Tectonic/JEFuller prior to the first Steering Committee meeting. The previous planning approach was designed to meet county-wide planning requirements for FEMA's Community Rating System (CRS) and DMA 2000, and initially employed FEMA's ten step planning procedures outlined for the FEMA CRS Program [26]. More plan elements were added later in the planning process to provide DMA 2000 required elements. The resultant document is the current 2004 Plan.

The overall process began in May 2002 and extended for approximately 2.5 years. A mitigation planning/advisory committee was initially formed and private consultants were hired to assist the planning effort. The committee met regularly for the first year during the initial development of the 2004 Plan and then less often during the final completion phases and post FEMA comment changes. The 2004 Plan elements were developed both during the committee meetings and also through task assignments that were completed by individual participating jurisdictions. The process worked

[26] CRS is a voluntary incentive program through FEMA that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Program (NFIP) requirements. Benefits of participation in CRS include discounted flood insurance premium rates that reflect the reduction in flood risk from community actions and an increases awareness of flood insurance benefits.

moderately well, but required a tremendous amount of time and budget that is not available (or necessarily required as far as CRS specific elements may be concerned) for this planning process.

A conclusion of the 2004 Plans process assessment was that the new planning process and approach would need to follow DMA 2000 planning procedures instead of the 10 step CRS process. The new plan will also need to be formatted to comport with new FEMA review guidelines and move away from the CRS formatting. Steering Committee participants will also be required to take a greater level of responsibility in completing task assignments and providing planning data to the consultant team for inclusion in the Plan.

The planning process was presented and discussed at the first multi-jurisdictional Steering Committee meeting and was contrasted to the 2004 Plan approach. There were a few veteran planning/advisory committee members that were involved with the development of the 2004 Plan, so there was some institutional knowledge of the prior process represented during the update process.

2.3 Planning Team

2.3.1 General

The process used to update the 2004 Plan included the use of a two-tiered, multi-jurisdictional planning team. The first tier was a multi-jurisdictional Steering Committee (Steering Committee) that is comprised of one or more representatives from each participating jurisdiction, plus other interested and invited agencies and organizations. The second tier was the Local Planning Team, which was comprised of jurisdiction specific individuals involved in assisting their Steering Committee representative to in the completion of task assignment and worksheets.

The role of the Steering Committee was to work with the planning consultant to perform the coordination, research, and planning element activities required to update the 2004 Plan. Attendance by each participating jurisdiction was required for every Steering Committee meeting as the meetings were structured to progress through the planning process. Steps and procedures for updating the 2004 Plan were presented and discussed at each Steering Committee meeting, and task assignments and corresponding worksheets were normally given. Each meeting's content and discussions built on information discussed and assigned at the previous meeting, creating a stepwise and systematic process for preparing the updated Plan. The Steering Committee also had the responsibility of liaison to the Local Planning Team, and was tasked with:

- Conveying information and assignments received at the Steering Committee meetings to the Local Planning Team for discussion and completion.
- Ensuring that all requested assignments and worksheets were completed fully and returned on a timely basis.
- Arranging for review and official adoption of the Plan.

The function and role of the Local Planning Teams were to:

- Provide support and data.
- Assist their Steering Committee representative(s) in completing each assignment and the associated worksheets.
- Make planning decisions regarding Plan components.
- Review the Plan draft documents

2.3.2 *Primary Point of Contact*

A primary point of contact has been established for each participating jurisdiction. This person or position is normally a Steering Committee member and is the lead contact for information regarding the hazard mitigation planning for their jurisdiction. Table 2-1 summarizes the primary points of contacts identified for each participating jurisdiction.

Table 2-1: List of jurisdictional primary points of contact

Jurisdiction	Name	Department / Position	Address	Phone	Email
Doña Ana County	John Gwynne	Doña Ana County Flood Commission / Engineer Supervisor	845 North Motel Boulevard, Room 1-250, Las Cruces, NM 88007	575-525-5554	johngw@donaanacounty.org
City of Anthony	Betty Gonzalez	City Council / City Trustee	200 Saint Anthony Street, Anthony, NM 88021	575-882-3348	bgbetty@aol.com
Elephant Butte Irrigation District	Delyce Maciel	Human Resources Department / HR Manager and District Safety Director	530 South Melendres Street, Las Cruces, NM 88005	575-526-6671 Ext. 411	dmaciel@ebid-nm.org
Village of Hatch	Mike Castillo	Public Works Department / Director	133 N. Franklin Street P.O. Box 220 Hatch, NM 87937	575-267-5216	pwd@villageofhatch.org
City of Las Cruces	J.D. Padilla	Public Works Department / Floodplain Administrator	700 North Main Street, Room 2108C, Las Cruces, NM 88001	575-528-3131	jdpadilla@las-cruces.org
Town of Mesilla	Kevin Hoban	Fire Department / Fire Chief	2231 Avenida de Mesilla P.O. Box 10 Mesilla, NM 88046	575-523-1311	kevinhoban@msn.com
New Mexico State University	Katrina Doolittle	Environmental Health & Safety / Director	MSC-3578, P.O. Box 30001, Academic Research Building C, Room 109, 1620 Standley Drive, Academic Research Building C, Las Cruces, NM 88003	575-646-3327	kadoolit@ad.nmsu.edu
City of Sunland Park	Dwaine Solana	Community Development / Building Inspector	1000 McNutt Road, Suite G, Sunland Park, NM 88063	575-589-6912	dsolana@cityofsunlandpark-nm.org

2.3.3 *Steering Committee Assembly*

At the beginning of the planning process, Doña Ana County organized and identified members for the Steering Committee by initiating contact with, and extending invitations to, all incorporated municipalities, the Elephant Butte Irrigation District, and New Mexico State University as the intended Plan participants. Other key local, state and federal agencies and entities were also invited, as well as the Tectonic/JEFuller consultant team. Further discussion of invitations extended to other agencies and entities with potential interest in hazard mitigation for Doña Ana County are discussed in Section 2.3.4. The participating members of the Steering Committee are summarized in Table 2-2. Returning or veteran planning/advisory team members from the 2004 Plan effort are highlighted.

Table 2-2: Multi-jurisdictional Steering Committee participants

Name	Jurisdiction / Organization	Department / Position	Steering Committee Role
David Almaguer	Doña Ana County	Law & Safety Department - Office of Emergency Management / Emergency Mgmt Supervisor	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Wendy Blackwell	State of New Mexico	Department of Homeland Security and Emergency Management - Preparedness Bureau / State Hazard Mitigation Officer	Steering Committee participant Plan Review for State of New Mexico
Chris Brown	New Mexico State University	Geography Department / Spatial Apps Research Center / Department Head / Director	Steering Committee participant Local Planning Team Resource
Lloyd Burns	Village of Hatch	Board of Trustees / Trustee	Steering Committee participant Local Planning Team Resource
David Cappelli	Tectonic Engineering & Surveying Consultants, P.C.	Consultant / Senior EOP Specialist	Planning Consultant
Raymond Carr	New Mexico State University	Geography Department / GIS Analyst	Steering Committee participant Local Planning Team Resource
Mike Castillo	Village of Hatch	Public Works Department / Director	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Katrina Doolittle	New Mexico State University	Environmental Health & Safety / Director	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Paul Dugie	Doña Ana County	Community Services Department - Office of the Flood Commission / Director	Steering Committee participant Local Planning Team Resource
Lorenzo Espinoza	State of New Mexico	Department of Homeland Security and Emergency Management / Local Preparedness Coordinator	Steering Committee participant
Orlando V. Fierro	Doña Ana County	Community Services Department - Office of the Flood Commission / Planner / CRS Coordinator (No longer with DACFC)	Former Steering Committee Primary Point of Contact; Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Betty Gonzalez	City of Anthony	City Council / City Trustee	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Jeff Gray	Town of Mesilla	Marshal's Department / Marshal	Steering Committee participant Local Planning Team Resource
Todd Gregory	Las Cruces Public Schools	Safety & Security / Coordinator	Steering Committee participant Local Planning Team Resource
Andrew Guerra	Bohannan Huston	Consultant / Engineer	Steering Committee participant Local Planning Team Resource
John Gwynne	Doña Ana County	Community Services Department - Office of the Flood Commission / Engineer Supervisor	Steering Committee Primary Point of Contact Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Jeff Harris	Las Cruces Public Schools	Technical Support Services / Director	Steering Committee participant Local Planning Team Resource
Glen Haubold	New Mexico State University	Facilities and Services / Assistant Vice President	Steering Committee participant Local Planning Team Resource

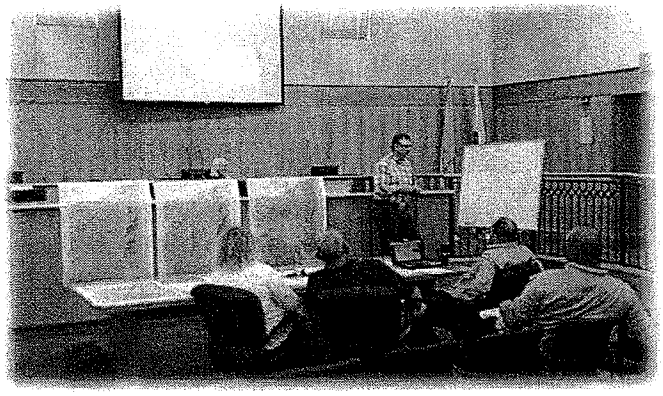
Table 2-2: Multi-jurisdictional Steering Committee participants

Name	Jurisdiction / Organization	Department / Position	Steering Committee Role
Roger Hedrick	Doña Ana County	Community Services Department - Community Development / Deputy Director	Steering Committee participant Local Planning Team Resource
Kevin Hoban	Town of Mesilla	Fire Department / Fire Chief	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Daniel Hortert	Doña Ana County	Community Services Department - Community Development / Planner	Steering Committee participant Local Planning Team Resource
Richard P. Kummerle	Tectonic Engineering & Surveying Consultants, P.C.	Consultant / Project Principal	Planning Consultant
Patrick Lopez	Elephant Butte Irrigation District	SCADA - Hydrology - Water Quality / Supervisor	Steering Committee participant Local Planning Team Resource
Martin Lopez	La Clinica de Familia	(none provided)	Steering Committee participant
Debbie Lujan	Town of Mesilla	Public Works Department / Director	Steering Committee participant Local Planning Team Resource
Delyce Maciel	Elephant Butte Irrigation District	Human Resources / HR Manager and District Safety Director	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Edward Martella	Tectonic Engineering & Surveying Consultants, P.C.	Consultant / Vice President / Project Mgr	Planning Consultant
Diana Murillo	City of Anthony	City Council / City Trustee	Steering Committee participant Local Planning Team Resource
Scott Ogden	JE Fuller/ Hydrology & Geomorphology, Inc.	Sub-Consultant / Asst. Project Mgr / Senior Engineer	Planning Consultant
J.D. Padilla	City of Las Cruces	Public Works Department / Floodplain Administrator	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Miguel Parra	The Ability Center for Independent Living	Social Security Payee Advocate	Steering Committee participant
Dwaine Solana	City of Sunland Park	Community Development / Building Inspector	Jurisdictional Point of Contact Lead coordinator for Local Planning Team Steering Committee participant
Michael Villa	Doña Ana County	Law & Safety Department - Office of Emergency Management / OEM Coordinator	Steering Committee participant Local Planning Team Resource
Alexis Zarret	New Mexico Commission for Deaf and Hard of Hearing	Las Cruces Office / Assistant / Interpreter	Steering Committee participant

Lists of Local Planning Team members and their respective roles, for each jurisdiction, are provided in Appendix C.

2.3.4 Steering Committee Activities

The Steering Committee met for the first time on December 13, 2011 to begin the planning process. Three more meetings were convened on about a six week basis to step through the plan review and update process. Steering Committee members used copies of the 2004 Plan for review and reference during each meeting. Table 2-3 summarizes the Steering Committee meetings along with a brief list of the agenda items discussed. Detailed meeting notes for all of the Steering Committee meetings are provided in Appendix C. Action item status reports are also included with meeting notes as well as a final status report. The sign-in sheets in Appendix C document the attendance at the first and subsequent meetings.



Following each Steering Committee meeting, the Point of Contact for each jurisdiction coordinated with their Local Planning Team as needed to work through the assignments and generate the necessary Plan elements pertinent to that jurisdiction.

Table 2-3: Summary of planning meeting dates, places and agendas convened as part of the plan update process

Meeting Type, Date, and Location	Meeting Agenda
Project Coordination Meeting December 13, 2011 8:30AM-9:45AM Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conf. Rm.) 845 N. Motel Blvd, Las Cruces, NM	1. INITIAL INTRODUCTIONS 2. DISCUSSION OF SCOPE AND PROJECT SCHEDULE 3. CURRENT PLAN REVIEW a. Quick Plan Overview b. Proposed Outline for New Plan 4. DATA NEEDS a. Base GIS Data b. Hazard specific data c. Critical Facilities and Infrastructure

Table 2-3: Summary of planning meeting dates, places and agendas convened as part of the plan update process

Meeting Type, Date, and Location	Meeting Agenda
Steering Committee Meeting No. 1 December 13, 2011 10:00AM-12:30PM Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conf. Rm.) 845 N. Motel Blvd, Las Cruces, NM	1. INTRODUCTIONS FOR ARRIVALS 2. DMA2K OVERVIEW AND UPDATE REQUIREMENTS a. General Planning Elements b. Current Plan c. Update Requirements 3. PLANNING PROCESS a. DACSC Roles and Responsibilities b. Additional Invitations c. Public Involvement Strategy 4. RISK ASSESSMENT a. Initial Hazard List Identification 5. SCHEDULE NEXT MEETING(S)
Steering Committee Meeting No. 2 January 24, 2012 8:30AM-12:30PM Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conf. Rm.) 845 N. Motel Blvd, Las Cruces, NM	1. INITIAL INTRODUCTIONS 2. TASK ASSIGNMENT STATUS REVIEW 3. RISK ASSESSMENT TOPICS: a. Hazard Profile Data Review i. Mapping / Maps ii. Historic Hazard Database Overview b. Critical Priority Risk Index (CPRI) c. Critical Facilities And Infrastructure d. Development Trend Discussion i. Past Plan Cycle (last 5 years) ii. Future Development (5-year horizon) 4. MITIGATION STRATEGY TOPICS a. Existing Mitigation Action/Project Assessment 5. CLOSING ITEMS a. Schedule Next Meeting b. Summarize Action Items / Task Assignments

Table 2-3: Summary of planning meeting dates, places and agendas convened as part of the plan update process

Meeting Type, Date, and Location	Meeting Agenda
Steering Committee Meeting No. 3 March 13, 2012 8:30AM-12:30PM Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conf. Rm.) 845 N. Motel Blvd, Las Cruces, NM	1. TASK ASSIGNMENT STATUS REVIEW 2. MITIGATION STRATEGY TOPICS a. NFIP Statistics and Compliance b. Repetitive Loss Properties c. Capability Assessment i. Legal and Regulatory (Codes / Ordinances / Plans / Manuals / Guidelines) ii. Administrative and Technical Staff Resources iii. Fiscal Capabilities 3. PLANNING PROCESS TOPICS a. Plan Integration and Incorporation i. Past Plan Cycle ii. Future Strategy 4. PLAN MAINTENANCE STRATEGY a. Review/Discuss maintenance and monitoring over the last plan cycle b. Develop New Monitoring Schedule c. Plan Update Schedule d. Continued Public Involvement 5. PROMULGATION PROCESS 6. CLOSING ITEMS a. Schedule Next Meeting b. Summarize Action Items / Task Assignments
Steering Committee Meeting No. 4 March 13, 2012 9:00AM-5:00PM Doña Ana County Government Center, County Commission Chambers 845 N. Motel Blvd, Las Cruces, NM	1. TASK ASSIGNMENT STATUS REVIEW 2. RISK ASSESSMENT TOPICS a. Vulnerability Analysis Review and Discussion 3. MITIGATION STRATEGY TOPICS a. Goals i. Review current plan goals ii. Formulate goals for updated plan b. Mitigation Actions/Projects i. Action/Project Identification 1. Repetitive Loss Structures Recommendations ii. Implementation Strategy 4. PROMULGATION PROCESS 5. CLOSING ITEMS a. Summary of Task Assignments 6. *OPTIONAL COMMUNITY ASSISTANCE TIME*: (Tectonic/JEFuller worked with jurisdictions needing assistance to complete any of the task assignments)

2.3.5 Agency/Organizational Participation

The planning process used to develop the 2004 Plan included participation from several agencies and organizations which operate within or have jurisdiction over small and large areas of Doña Ana County. At the start of the Plan update, a list of known and/or potential stakeholders was compiled. Some were chosen due to past history in the development of the 2004 Plan, to provide continuity and institutional knowledge to the Steering Committee. Invitations were extended via emails and facsimile and copies are provided in Appendix C. Personal invitations by Doña Ana County Flood Commission personnel were also extended to the El Paso Electric Company (EPEC) and International Boundary and Water Commission (IBWC) to participate in the planning meetings. After the first meeting, the Steering Committee chose to extend a broader invitation to all citizens within Doña Ana County via website postings and newspaper articles, which are discussed more thoroughly in Section 2.4.2. This approach was considered the best way to reach interested non-profits and businesses within the County and provide them an opportunity for participation in the planning process. The following list includes all entities that were either directly invited or that responded to the public invitations and attended at least one Steering Committee meeting:

Agency / Organization	Contact Position
Bohannan Huston	• Consultant – Engineer
City of Anthony	• City Council – City Trustee
City of Las Cruces	• Public Works Department – Floodplain Administrator
City of Sunland Park	• Community Development – Director and Building Inspector
Doña Ana County	• Office of Emergency Management – OEM Supervisor and Coordinator • Office of Flood Commission – Director, Engineer Supervisor, CRS Coordinator • Community Development – Deputy Director and Planner
El Paso Electric Company	• Distribution and Operations - Manager
Elephant Butte Irrigation District	• Administration – Controller • Human Resources - HR Manager and District Safety Coordinator • SCADA-Hydrology-Water Quality - Supervisor
FEMA Region VI	• Mitigation Division – Mitigation Planning Specialist
International Boundary and Water Commission	• Engineering Department – Principal Engineer
JE Fuller/ Hydrology & Geomorphology, Inc.	• Consultant – Engineer
La Clinica de Familia	• Coordinator
Las Cruces Public Schools	• Safety and Security – Coordinator • Technical Support Services - Director

New Mexico Commission for Deaf and Hard of Hearing	• Las Cruces Office – Assistant Interpreter
New Mexico Department of Homeland Security and Emergency Management	• Preparedness Bureau – State Hazard Mitigation Officer, Local Preparedness Coordinator, State NFIP Coordinator
New Mexico State University	• Environmental Health & Safety - Director • Facilities and Services – Assistant Vice President • Geography Department – Director and GIS Analyst
South Central Council of Governments	• Regional Planning – Planner
Tectonic Engineering & Surveying Consultants, P.C.	• Consultant – Engineer
The Ability Center for Independent Living	• Social Security Payee Advocate
Town of Mesilla	• Administration – Mayor • Fire Department – Fire Chief • Marshal's Department – Marshal • Public Works Department - Director
Village of Hatch	• Administration – Village Clerk • Board of Trustees – Mayor and Trustee • Fire Department – Fire Chief • Police Department – Police Chief • Public Works Department - Director

An integral part of the planning process included coordination with agencies and organizations outside of the participating jurisdiction's governance to obtain information and data for inclusion into the Plan or to provide more public exposure to the planning process. Much of the information and data that is used in the risk assessment is developed by agencies or organizations other than the participating jurisdictions. In some cases, the jurisdictions may be members of a larger organization that has jointly conducted a study or planning effort like the development of a community wildfire protection plan or participation in an area association of governments. Examples of those data sets include the FEMA floodplain mapping, community wildfire protection plans, severe weather statistics, hazard incident reports, and regional comprehensive plans. The resources obtained, reviewed and compiled into the risk assessment are summarized in Section 2.5 and at the end of each subsection of Section 3.3 of this Plan. Jurisdictions needing these data sets obtained them by either requesting them directly from the host agency or organization, downloading information posted to website locations, or engaging consultants.

2.4 Public Involvement

2.4.1 Previous Plan Assessment

The pre- and post-draft public involvement strategy for the 2004 Plan was extensive and time consuming, with many of the activities being conducted to satisfy FEMA CRS requirements as well as the DMA 2000 requirements. Pre-draft efforts included public meetings, public outreach via handing out flyers at public events and distribution of

questionnaires, and issuing press release notices of the planning effort to local media outlets. The post-draft strategy involved a second round of public meetings announced via local news media, targeted draft plan review requests from agencies not directly involved in the planning process, and the standard open meeting presentations required for obtaining resolutions of adoption by the participating jurisdictions. The 2004 Plan does not expound on the success or attendance at the public meetings, or of any public comments. The 2004 Plan did note that 4,702 questionnaires (out of 70,000 mailed) were received and three agencies outside of the original planning team provided comment on the draft plan.

The Steering Committee discussed the prior public involvement actions and concluded that the effort was exceptional and provided lots of opportunity for public input to the planning process, however, the expense and time involved to duplicate that effort were not feasible for this Plan update. Since all of the participating jurisdictions represented by the Steering Committee regularly use press releases, newspaper articles and/or website announcements to communicate jurisdictional news and activities, and post agendas for council/committee/board actions, the Steering Committee chose to use these venues to make the public aware of the planning effort and provide an opportunity for public input and participation. Also, since any formal council/committee/board action has a built-in public notification and comment opportunity, the Steering Committee chose to continue using this process as one of the post-draft mechanisms for getting the Plan before the public.

2.4.2 *Plan Update Strategy*

Public involvement and input to the planning process was encouraged cooperatively among all of the participating jurisdictions using several venues throughout the course of the pre-draft planning. Public notification for county-wide activities within Doña Ana County is typically accomplished through the County's website and through articles or legal notices published in the Las Cruces Sun-News, which has a county-wide distribution and readership. Citizens within the County are accustomed to looking to these two sources for news and announcements of public events and government activities that include all Doña Ana jurisdictions.

At the start of the planning process, the Steering Committee jointly issued a press release that ran in the Friday, January 6, 2012 Las Cruces Sun-News as well as legal posting of the hazard mitigation planning process that was published in the Sunday, January 8, 2012 Las Cruces Sun-News. A web page notice was developed for the Doña Ana County website and reference to that website was provided in the January 8, 2012 Las Cruces Sun-News legal posting. In addition, Elephant Butte Irrigation District, the City of Las Cruces, and New Mexico State University also either duplicated the County's website notice or provided a text announcement with a link to the County website. On the County website and the county press release, email and phone contact information were provided. Any comments received from these notices were to be routed to the Primary Point of Contact at the Doña Ana County Flood Commission (DACFC) for a response. No responses to the pre-draft public notices or website postings were received by DACFC or Tectonic.

The post-draft public involvement strategy included the following actions:

- Update of the County website to announce the availability of the draft Plan at the County's website. A digital copy of the draft Plan was posted to the County website.
- A legal notice published in the June 24, 2012 Sunday edition of the Las Cruces Sun-News that announced the availability of the draft Plan and requested public review and comment. The legal notice provided the County's website address and email and phone contact information for both Tectonic and DACFC.
- A radio announcement was aired on Wednesday, June 20, 2012 by the County's public information officer, Jess Williams, stating that the draft Plan was completed and was now available for review at the County's website.
- Standard board/council/commission meetings wherein the Plan was presented and formally adopted via resolution by each of the governing bodies for each participating jurisdiction. Depending upon the jurisdiction, the adoption process may have included a public meeting and/or a formal public hearing prior to formal action by the board/council/commission.

Copies of the pre- and post-draft public notices, web pages, and newspaper notices are provided in Appendix D.

2.5 Reference Documents and Technical Resources

Over the course of the update planning process, numerous other plans, studies, reports, and technical information were obtained and reviewed for incorporation or reference purposes. The majority of sources referenced and researched pertain to the risk assessment and the capabilities assessment. To a lesser extent, the community descriptions and mitigation strategy also included some document or technical information research. Table 2-4 provides a reference listing of the primary documents and technical resources reviewed and used in the Plan. Detailed bibliographic references for the risk assessment are provided at the end of each hazard risk profile in Section 3.3. Other bibliographic references are provided as footnotes throughout the Plan.

Table 2-4: List of resource documents and references reviewed and incorporated in the plan update process

Referenced Document or Technical Source	Resource Type	Description of Reference and Its Use
American Society of Civil Engineers	Technical Reference	Source for design wind speed data.
Bureau Net (2011)	Website Database	Source for NFIP statistics.
Doña Ana County, City Of Las Cruces, City of Sunland Park, Town Of Mesilla, Village Of Hatch, New Mexico All Hazard Mitigation Plan (2004)	Hazard Mitigation Plan	FEMA approved hazard mitigation plan that formed the starting point for the update process.
Doña Ana County Community Wildfire Protection Plan (Draft 2012)	CWPP	Source for wildfire history and risk data
Doña Ana County Comprehensive Plan (1999)	County Comprehensive Plan	Source for past and future growth descriptions and projections. Some hazard data also compiled with this plan.
Doña Ana Historical Society (2012)	Website Database	Source for historic records.

Table 2-4: List of resource documents and references reviewed and incorporated in the plan update process

Referenced Document or Technical Source	Resource Type	Description of Reference and Its Use
InciWeb – Incident Information System (2011)	Wildfire Data	Source wildfire incident information for historical hazard and profile information, specifically for Horseshoe 2 and Monument Fire..
Environmental Working Group's Farm Subsidy Database (2012)	Website Database	Source of disaster related agricultural subsidies. Used in the risk assessment.
Federal Emergency Management Agency	Technical and Planning Resource	Resource for HMP guidance (How-To series), floodplain and flooding related NFIP data (mapping, repetitive loss, NFIP statistics), and historic hazard incidents. Used in the risk assessment and mitigation strategy.
HAZUS-MH	Technical Resource	Based data sets within the program were used in the vulnerability analysis.
Interpreting the Elephant Butte Irrigation District for Water Users	Jurisdictional Data Resource	Source of history and operational background for EBID.
Mesilla Valley Economic Development Alliance	Demographic and Economic Data Resource	Source of data for demographic and economic information for the County and jurisdictions.
National Climatic Data Center	Technical Resource	Online resource for weather related data and historic hazard event data. Used in the risk assessment.
National Integrated Drought Information System (2007)	Technical Resource	Source for drought related projections and conditions. Used in the risk assessment.
National Response Center	Technical Resource	Source of traffic related HAZMAT incidents and rail accidents. Used in the risk assessment.
National Weather Service	Technical Resource	Source for hazard information, data sets, and historic event records. Used in the risk assessment.
National Wildfire Coordination Group (2011)	Technical Resource	Source for historic wildfire hazard information. Used in the risk assessment.
New Mexico Department of Workforce Solutions (2012)	Website Resource	Source for labor statistics and building permit information.
New Mexico Natural Hazard Mitigation Plan (2010)	Hazard Mitigation Plan	The state plan was used a source of hazard information and the state identified hazards were used as a starting point in the development of the risk assessment. The State Plan mitigation goals were also referenced.
New Mexico Taxation and Revenue Department	Website Data	Source of economic data for the County and communities.
One Valley, One Vision 2040 Regional Plan	Regional Comprehensive Plan	Source for past and future growth descriptions and projections. Some hazard data also compiled with this plan.
Standard on Disaster/Emergency Management and Business Continuity Programs (2000)	Standards Document	Used to establish the classification and definitions for the asset inventory. Used in the risk assessment.
Town of Mesilla Comprehensive Plan (2004)	Jurisdictional Comprehensive Plan	Source for past and future growth descriptions and projections. Some hazard data also compiled with this plan.
U.S. Army Corps of Engineers	Dam Inventory	Source for dam locations and characteristics
U.S. Bureau of Land Management	GIS Data	Source for land ownership data
U.S. Bureau of Reclamation	Rio Grande Project Data	Source for data associated with the Rio Grande Project features including dam failure limits for Caballo Dam.
U.S. Census Bureau	Technical Data	TIGER/Line shapefile for County census block data was used to obtain block boundaries, population, and housing units
U.S. Forest Service	Technical Data	Source for local wildfire data. Used in the risk assessment.
U.S. Geological Survey	Technical Data	Source for geological hazard data and incident data. Used in the risk assessment.
Village of Hatch Comprehensive Plan (2003)	Jurisdictional Comprehensive Plan	Source for past and future growth descriptions and projections. Some hazard data also compiled with this plan.

Table 2-4: List of resource documents and references reviewed and incorporated in the plan update process

Referenced Document or Technical Source	Resource Type	Description of Reference and Its Use
Western Regional Climate Center	Website Data	Online resource for climate data used in climate discussion of Section 4
Wikipedia (2012)	Website Reference	Source of information about various communities.
Zillow Real Estate Values	Website Reference	Obtained home value indexes for incorporated and unincorporated areas of Doña Ana County to use for residential values in vulnerability assessment.

2.6 Plan Integration Into Other Planning Mechanisms

Incorporation and/or integration of the Plan into other planning mechanisms, either by content or reference, enhances a community's ability to perform hazard mitigation by expanding the scope of the Plan's influence. It also helps a community to capitalize on all available mechanisms at their disposal to accomplish hazard mitigation and reduce risk.

2.6.1 Past Plan Incorporation/Integration Assessment

A poll of the participating jurisdictions revealed that success of incorporating the 2004 Plan elements into other planning programs, has varied over the past planning cycle. Ways in which the 2004 Plan has been successfully incorporated or referenced into other planning mechanisms are summarized below for each jurisdiction. It is noted that no information is provided for the City of Anthony, Elephant Butte Irrigation District, and New Mexico State University, as none of these jurisdictions were participants in the 2004 Plan.

All 2004 Plan Participating Jurisdictions:

- Referenced 2004 Plan in the 2010 update of the Doña Ana County Emergency Operations Plan (EOP).
- Local Emergency Planning Committee (LEPC) presentations and decision making for locating/moving critical facilities.
- Referenced during DFIRM development and review.

Doña Ana County and City of Las Cruces:

- Community Rating System (CRS) Section 500 Activity and Insurance Services Office (ISO) Community Assistance Visits (CAVs).

Town of Mesilla:

- Referred to for funding of storm drain system pump upgrades.
- Referred to in the Community Development Plan.

In all of the above instances, the 2004 Plan was found to be beneficial, and especially with regard to the risk assessment and mitigation strategy information. Other benefits of incorporating the 2004 Plan identified by the Steering Committee included:

- FEMA mitigation grant funding eligibility.
- Better CRS ratings.
- EOP Update – basis for identifying known hazards, hazard annex creations, provided more staff awareness of hazards.
- Helped during the development of DFIRMs to verify flood hazard delineations.

Challenges to incorporating the 2004 Plan discussed and identified by the Steering Committee included:

- Lack of outreach.
- Staff turnover and lack continuity to original steering committee.
- Lack of communicating planning responsibilities to successors.
- Lack of an effective Continuity of Operations Plan (COOP).

2.6.2 *Five Year Plan Integration/Incorporation Strategy*

With the efficacy of integrating the 2004 Plan during the last cycle in view, the Steering Committee identified typical ways to use and incorporate the Plan over the next five-year planning cycle, as follows:

- Use of, or reference to, Plan elements in updates/revisions to codes, ordinances, general and/or comprehensive planning documents, and other long-term strategic plans.
- Integration of defined mitigation A/Ps into capital improvement plans and programming.
- Reference to Plan risk assessments during updates or revisions to land use planning and zoning maps.
- Resource for developing and/or updating emergency operations plans, community wildfire protection plans, emergency response plans, etc.
- Reference during grant application processes.
- Use of the Plan as a resource during LEPC meetings.

Specific opportunities for integrating and/or referencing the Plan into other planning mechanisms over the next five years are summarized below for each participating jurisdiction. The jurisdiction' Steering Committee representative will take responsibility to ensure that the Plan, risk assessment, goals and mitigation A/Ps are integrated and/or incorporated into the listed planning mechanism by participating in those efforts as they occur.

Doña Ana County:

- Comprehensive Plan Update – within 3 years
- Floodplain Damage Prevention Ordinance Update – annually
- CIP Updates
- Drainage Master Plans – 1 or 2 every year
- Community Master Plans – at least one every year

City of Anthony:

- General Plan update – within 3 years
- Stormwater Drainage Planning – within 2 years

Village of Hatch:

- Floodplain Damage Prevention Ordinance Update – annually
- General Master Planning

City of Las Cruces:

- Floodplain Damage Prevention Ordinance Update – annually
- Comprehensive Plan updates
- OVOV 2040 Plan

Town of Mesilla:

- Comprehensive Plan Update – by 2014
- Floodplain Damage Prevention Ordinance Update – annually
- Stormwater Drainage Planning – several new developments

City of Sunland Park:

- Floodplain Damage Prevention Ordinance Update – annually
- General Master Planning

Elephant Butte Irrigation District:

- Stormwater Management Plan
- General Master Planning
- Emergency Action Plan update – within 1 year

New Mexico State University:

- Master Plan Update
- Parking and Transportation Update – Reviews
- Internal NMSU All Hazards EOP – 2 year reviews
- Utility Tunnel Survey
- Unified Mapping effort

2.6.3 Plan Incorporation Process

Each jurisdiction has particular processes that are followed for officially incorporating and adopting planning documents and tools. Many of the processes and procedures are similar for jurisdictions with comparable government structures.

In general, planning documents prepared by the various departments or divisions of a particular jurisdiction are developed using an appropriate planning process that is overseen and carried out by staff, with the occasional aide of consultants. Each planning process is unique to the plan being developed, but all usually involve the formation of a steering committee, have some level of interagency/stakeholder coordination within the plan's effective area. Public involvement may also be incorporated depending on the type of plan when appropriate. New or updated plans are usually developed to a draft stage wherein they are presented to the respective governing body for initial review and comment. Upon resolution and address of all comments, which may take several iterations, the plans are then presented to the governing body for final approval and official adoption.

Integration or reference to the Doña Ana County All Hazard Mitigation Plan into these various processes will be accomplished by the active participation of the Steering Committee representative(s) from each jurisdiction, in the other planning teams or committees to ensure that the Plan risk assessment, goals, and mitigation A/Ps are integrated and/or incorporated into the planning mechanism as appropriate.

Table 2-5 provides a summary of standard operating procedures that each of the participating jurisdictions follow when considering and incorporating official planning mechanisms, and how they apply to integration of the Plan.

Table 2-5: Jurisdictional standard operating procedures for integration of planning mechanisms

Jurisdiction	Description of Plan Integration Standard Operating Procedures
Doña Ana County	General planning documents prepared by all departments for Doña Ana County are developed by staff to a final draft stage and presented to the Board of County Commissioners in a study work session for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the Board of County Commissioners.
Anthony, City of	General planning documents prepared by all departments for City of Anthony are developed by staff to a final draft stage and presented to the Board of Trustees (BOT) for review and comment. Final approval by the BOT is given once all comments have been resolved and is normally done using a formal resolution process For regional planning led by Doña Ana County or other regional agencies, approval is sought from the BOT, and then submitted to the regional agency., Once approved by the BOT, the plan is submitted to Dona Ana County for inclusion into their plan, which is presented to the Board of County Commissioners in a study work session for review and comment.

Table 2-5: Jurisdictional standard operating procedures for integration of planning mechanisms

Jurisdiction	Description of Plan Integration Standard Operating Procedures
Elephant Butte Irrigation District	General planning documents developed by all departments for the Elephant Butte Irrigation District, are reviewed by staff to a final draft stage and presented to the Treasure/Manager for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the Board of Directors.
Hatch, Village of	General planning documents prepared by all departments for the Village of Hatch are developed by staff to a final draft stage and presented to the Board of Trustees in a study work session for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the Board of Trustees.
Las Cruces, City of	General planning documents prepared by all departments for the City of Las Cruces are developed by staff to a final draft stage and presented to the City Council in a study work session for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the City Council.
Mesilla, Town of	General planning documents prepared by all departments for the Town of Mesilla are developed by staff to a final draft stage and presented to the Mayor and Board of Trustees in a study work session for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the Board of Trustees.

Table 2-5: Jurisdictional standard operating procedures for integration of planning mechanisms

Jurisdiction	Description of Plan Integration Standard Operating Procedures
New Mexico State University	New Mexico State University established a University Board named Emergency Planning Committee whose general purpose is to study, recommend, and implement coordinated emergency preparedness and response activities for the NMSU System. The committee will plan and coordinate for potential emergent conditions brought on by both natural and manmade situations that potentially place university system personnel or assets in harm's way. Such incidents consist of, but are not limited to weather, fire, criminal acts, and hazardous materials. The Emergency Planning Committee strives to hold standing meetings once per month. In relation to hazard mitigation planning, the Emergency Planning Committee specifically: 1) Serves in an advisory capacity to NMSU System President regarding potential emergent situations, including, but not limited to, review and recommendations regarding the content and administration of the university's All Hazards Operations Plans, as well as the distinct, multi-agency, Doña Ana County All Hazard Mitigation Plan; 2) Serves in an advisory capacity to the NMSU System President regarding administration of Policy 2.25, Emergency Preparedness and other emergency response protocols. Acts collectively, or through its individual members, to coordinate with other NM agencies, municipalities, local public bodies and the community on issues involving public safety, including but not limited to emergency preparedness training, risk and loss mitigation, and emergency response to catastrophic events; 3) Acts collectively, or through its individual members, to coordinate with administrative bodies on campus charged with responsibility for university health and safety, including but not limited to the 1)Communicable Disease Preparedness Committee, 2)University Safety Commitee, 3)Institutional Biosafety Committee, 4) University Radiation Safety Committee, 5) Institutional Review Board; as well as with each NMSU component or department/unit, as requested, regarding its emergency plans required by Policy 2.25. 4) Develops and recommends the adoption, or revisión, of university policies and/or protocols.
Sunland Park, City of	General planning documents prepared by all departments for the City of Sunland Park are developed by staff to a final draft stage and presented to the city council in a study work session for review and comment. Final approval and official adoption of any planning document or mechanism is normally done using a formal resolution process through the City Council. The Doña Ana County All Hazard Mitigation Plan will be reviewed and as appropriate, incorporated into future planning documents and mechanism by the active participation of members of the Doña Ana County Mitigation Planning Team members in the development or update of those plans and mechanisms.

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SECTION 3: RISK ASSESSMENT

One of the key elements to the hazard mitigation planning process is the risk assessment. In performing a risk assessment, a community determines "what" can occur, "when" (how often) it is likely to occur, and "how bad" the effects could be[27]. According to DMA 2000, the primary components of a risk assessment that answer these questions are generally categorized into the following measures:

- **Hazard Identification and Screening**
- **Hazard Profiling**
- **Assessing Vulnerability to Hazards**

The risk assessment for Doña Ana County and participating jurisdictions was performed using a county-wide, multi-jurisdictional perspective, with much of the information gathering and development being accomplished by the Steering Committee. This integrated approach was employed because many hazard events are likely to affect numerous jurisdictions within the County, and are not often relegated to a single jurisdictional boundary. The vulnerability analysis was performed in a way such that the results reflect vulnerability at an individual jurisdictional level, and at a countywide level.

3.1 Hazard Identification and Screening

Hazard identification is the process of answering the question; *"What hazards can and do occur in my community or jurisdiction?"* For this Plan, the list of hazards identified in the 2004 Plan were reviewed by the Steering Committee with the goal of refining the list to reflect the hazards that pose the greatest risk to the jurisdictions represented by this Plan. The Steering Committee also compared and contrasted the 2004 Plan list to the comprehensive hazard list summarized in the 2010 State Plan[28] to ensure compatibility with the State Plan. Table 3-1 summarizes the 2004 Plan and 2010 State Plan hazard lists.

The review included an initial screening process to evaluate each of the listed hazards based on the following considerations:

- Experiential knowledge on behalf of the Steering Committee with regard to the relative risk associated with the hazard.
- Documented historic context for damages and losses associated with past events with a focus on events that have occurred during the last plan cycle.
- The ability/desire of the jurisdictions represented by the Steering Committee to develop effective mitigation actions/projects for the hazard under current DMA 2000 criteria.
- Consideration of and compatibility with the 2010 State Plan hazards.
- Duplication of effects attributed to each hazard.
- Focus on natural hazards.

[27] National Fire Protection Association, 2000, *Standard on Disaster/Emergency Management and Business Continuity Programs*, NFPA 1600.

[28] NMDHSEM, 2010, *New Mexico Natural Hazard Mitigation Plan*

Table 3-1: Initial hazard identification lists	
2004 Plan Hazard List	**2010 State Plan Hazard List**

• Drought
• Earthquake
• Flood Events
  o Dam Failure
  o Levee Failure
• HAZMAT
• High Winds
• Power Outage
• Severe Weather
  o Winter Storms
  o Severe Heat
• Terrorism
• Tornadoes
• Wildfire
	• Dam Failure
	• Drought
	• Earthquake
	• Expansive Soils
	• Extreme Heat
	• Floods
	• High Wind
	• Land Subsidence
	• Landslides
	• Severe Winter Storms
	• Thunderstorms
	  o Lightning
	  o Hail
	• Tornadoes
	• Wildland/WUI Fires
	• Volcanoes

One tool used in the initial screening process was a historic hazard database prepared as a part of the plan update. Historic data compiled into this database includes both declared and undeclared events. Sources for declared events included: Doña Ana County Flood Commission (DACFC), Doña Ana County Office of Emergency Management (DACOEM), New Mexico Department of Homeland Security & Emergency Management (NMDHSEM), Federal Emergency Management Agency (FEMA), and United States Department of Agriculture (USDA). Non-declared sources include: Local Jurisdictions, New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD), National Weather Service (NWS), National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), United States Geological Survey (USGS), and United States Forest Service (USFS), National Wildfire Coordination Group (NWCG), and others. The database represents a period of 1956 to 2011, with the majority of events being post 1990.

Table 3-2 summarizes the compilation of historic events. If a hazard is not listed, then no documentation of a historic event was found. Detailed historic hazard records are provided as digital files on the Plan CD as well as in Appendix E.

The culmination of the review and screening process by the Steering Committee resulted in a revised list of hazards that will be carried forward with this Plan. Rationale for both the 2004 Plan and 2010 State Plan hazards that were discontinued and dropped from further evaluation are summarized as follows:

- **Earthquake** was given serious consideration by the Steering Committee and was discussed at length in both Meeting No. 1 and No. 2. Risk based maps and data developed by the USGS were reviewed by the Steering Committee and were found to show that the seismic risk for the whole county is very low and there is a lack of any significant historic and damage causing seismic events. Based on these findings, the Steering Committee chose to focus energies on more prominent hazards and drop Earthquake from the list.

Table 3-2: Doña Ana County Historic Hazard Events – 1956 to 2011				
Hazard	No. of Records	Recorded Losses		
		Fatalities	Injuries	Damage Costs ($)
Drought	5	0	0	$280,000
Earthquake	4	0	0	$0
Extreme Heat/Cold	3	0	0	$585,870
Flood	51	0	0	$16,623,467
Hail	52	0	0	$17,260,743
HAZMAT Incident	43	1	34	$0
Heavy Snow	5	0	0	$0
Lightning	3	0	0	$19,669
Severe Wind	85	0	2	$2,963,197
Wildfire	5	0	1	$0

Notes:
- SEVERE WIND category includes all events with damaging winds (High Wind, Tornado, Microburst, Macroburst, Gustnadoes, etc.)
- Damage Costs include property and/or crop/livestock losses and are reported as is with no attempt to adjust costs to current dollar values. Furthermore, wildfire damage cost do not include the cost of suppression which can be quite substantial.
- Sources: NCDC, NWCG, NWS, USFS, DAC, NMDHSEM

- **Expansive Soils, Land Subsidence, Landslides, Severe/Extreme Heat, Winter Storms** - the Steering Committee chose to drop this hazard from further consideration due to the lack of historic damages and perceived risk.
- **High Winds and Tornadoes** – For Doña Ana County, the occurrence of tornadoes is rare, but not unheard of. High Winds associated with extreme pressure gradients, thunderstorms, and tropical storms are more common. In all cases, the Steering Committee concluded that mitigation of these wind related conditions would be similar and chose to collectively treat all wind related hazards as a single category to be called ***Severe Wind***.
- **Levee Failure** – this hazard was discontinued due to the fact that all levees within the County are owned and maintained by federal entities and the risk due to failure was considered to be minor.
- **Lightning and Hail** – both of these hazards were discussed at length by the Steering Committee and are recognized as hazards that have a history of damages and occurrence in the County. The efficacy of any potential mitigation measures was discussed and the Steering Committee concluded that the current public awareness campaigns designed to educate people about the dangers of these hazards and recommend safety measures to avoid injury, are sufficient to meet the goals of the participating jurisdictions and that no further profiling or mitigation will be pursued with this Plan.

The Steering Committee has selected the following list of hazards for profiling and updating based on the above explanations and screening process:

- **Dam Failure**
- **Drought**
- **Extreme Cold**
- **Flooding**
- **Severe Winds**
- **Wildfire**

3.2 Vulnerability Analysis Methodology

3.2.1 General

The following sections summarize the methodologies used to perform the vulnerability analysis portion of the risk assessment. For this Plan, the entire 2004 Plan vulnerability analysis was either revised or updated to reflect the new hazard categories, the availability of new data, or differing loss estimation methodology. Specific changes are noted below and/or in Section 3.3, as appropriate.

For the purposes of this vulnerability analysis, hazard profile maps were developed, as appropriate, to map the geographic variability of the risk posed by the Plan hazards selected by the Steering Committee. For some hazards, profile categories of EXTREME, HIGH, MEDIUM, and/or LOW were used and were subjectively assigned based on the factors discussed in the Probability and Magnitude sections of each hazard. Within the context of the county limits, the other hazards do not exhibit significant geographic variability and will not be categorized as such.

Unless otherwise specified in this Plan, the general cutoff date for new hazard profile data and jurisdictional corporate limits is the end of December 2011.

3.2.2 Calculated Priority Risk Index (CPRI) Evaluation

The first step in the vulnerability analysis (VA) is to assess the perceived overall risk for each of the plan hazards using a tool developed by the State of Arizona called the Calculated Priority Risk Index[29] (CPRI). The CPRI value is obtained by assigning varying degrees of risk to four (4) categories for each hazard, and then calculating an index value based on a weighting scheme. Table 3-3 summarizes the CPRI risk categories and provides guidance regarding the assignment of values and weighting factors for each category.

As an example, assume that the project team is assessing the hazard of flooding, and has decided that the following assignments best describe the flooding hazard for their community:

- Probability = Likely
- Magnitude/Severity = Critical
- Warning Time = 12 to 24 hours
- Duration = Less than 6 hours

The CPRI for the flooding hazard would then be:

CPRI = [(3*0.45) + (3*0.30) + (2*0.15) + (1*0.10)]
CPRI = 2.65

[29] ADEM, 2003, *Arizona Model Local Hazard Mitigation Plan*, prepared by JE Fuller/ Hydrology & Geomorphology, Inc.

Table 3-3: Calculated Priority Risk Index (CPRI) categories and risk levels

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	▪ Extremely rare with no documented history of occurrences or events. ▪ Annual probability of less than 0.001.	1	45%
	Possible	▪ Rare occurrences with at least one documented or anecdotal historic event. ▪ Annual probability that is between 0.01 and 0.001.	2	
	Likely	▪ Occasional occurrences with at least two or more documented historic events. ▪ Annual probability that is between 0.1 and 0.01.	3	
	Highly Likely	▪ Frequent events with a well documented history of occurrence. ▪ Annual probability that is greater than 0.1.	4	
Magnitude/ Severity	Negligible	▪ Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). ▪ Injuries or illnesses are treatable with first aid and there are no deaths. ▪ Negligible quality of life lost. ▪ Shut down of critical facilities for less than 24 hours.	1	30%
	Limited	▪ Slight property damages (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). ▪ Injuries or illnesses do not result in permanent disability and there are no deaths. ▪ Moderate quality of life lost. ▪ Shut down of critical facilities for more than 1 day and less than 1 week.	2	
	Critical	▪ Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). ▪ Injuries or illnesses result in permanent disability and at least one death. ▪ Shut down of critical facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	▪ Severe property damages (greater than 50% of critical and non-critical facilities and infrastructure). ▪ Injuries or illnesses result in permanent disability and multiple deaths. ▪ Shut down of critical facilities for more than 1 month.	4	
Warning Time	Less than 6 hours	Self explanatory.	4	15%
	6 to 12 hours	Self explanatory.	3	
	12 to 24 hours	Self explanatory.	2	
	More than 24 hours	Self explanatory.	1	
Duration	Less than 6 hours	Self explanatory.	1	10%
	Less than 24 hours	Self explanatory.	2	
	Less than one week	Self explanatory.	3	
	More than one week	Self explanatory.	4	

3.2.3 *Critical Facilities and Infrastructure*

A detailed inventory of critical facilities and infrastructure (CFI) was collected and evaluated for the 2004 Plan, however, the original data sets were not available for this update. Accordingly, a new CFI data base was established for the mitigation planning process and vulnerability assessment. For the purpose of this Plan, the Steering Committee used the following to establish a working definition for what qualifies as a critical facility or critical infrastructure:

> *Any systems, structures and/or infrastructure within a community whose incapacity or destruction would:*
>
> - *Have a debilitating impact on the defense or economic security of that community.*
> - *Significantly hinder a community's ability to recover following a disaster.*

Following the criteria set forth by the Critical Infrastructure Assurance Office (CIAO), the following eight general categories[30] are used by the Steering Committee to classify CFI:

1. **Communications Infrastructure:** Telephone, cell phone, data services, radio towers, and internet communications, which have become essential to continuity of business, industry, government, and military operations.
2. **Electrical Power Systems:** Generation stations and transmission and distribution networks that create and supply electricity to end-users.
3. **Gas and Oil Facilities:** Production and holding facilities for natural gas, crude and refined petroleum, and petroleum-derived fuels, as well as the refining and processing facilities for these fuels.
4. **Banking and Finance Institutions:** Banks, financial service companies, payment systems, investment companies, and securities/commodities exchanges.
5. **Transportation Networks:** Highways, railroads, ports and inland waterways, pipelines, and airports and airways that facilitate the efficient movement of goods and people.
6. **Water Supply Systems:** Sources of water; reservoirs and holding facilities; aqueducts and other transport systems; filtration, cleaning, and treatment systems; pipelines; cooling systems; and other delivery mechanisms that provide for domestic and industrial applications, including systems for dealing with water runoff, wastewater, and firefighting.
7. **Government Services:** Capabilities at the federal, state, and local levels of government required to meet the needs for essential services to the public.
8. **Emergency Services:** Medical, police, fire, and rescue systems.

Other CFI such as public libraries, schools, businesses, museums, parks, recreational facilities, historic buildings or sites, churches, residential and/or commercial structures, apartment complexes, and so forth, are typically not classified as CFI unless they serve a

[30] Instituted via Executive Order 13010, which was signed by President Clinton in 1996.

secondary function to the community during a disaster emergency (e.g. - emergency housing or evacuation centers). Ultimately, complete discretion was given to each community to determine what qualified as CFI in their community using the working definition as a basis for their decision. For example, a local business that employs a major segment of the community's workforce might be considered as a CFI to that community. Accordingly, each community made the final decision regarding what is, or is not a CFI for their jurisdiction.

Most of the CFI identified by the Steering Committee jurisdictions are adequately represented by a point on a map and are compiled into a point based GIS file. Each facility is attributed with a descriptive name, facility description, physical address, geospatial position (longitude and latitude), and an estimated replacement cost for the building/structure and contents. The exceptions to this are the irrigation system facilities identified by the Elephant Butte Irrigation District (EBID), which are linear in shape and represented by line features (canals, laterals, wasteways, and drains) within GIS. Those data sets are attributed with type descriptor and length. Tools used to compile the CFI database and attributes included: GIS data sets, on-line mapping utilities, insurance pool information, county assessors data, and manual data acquisition. Table 3-4 summarizes the CFI counts for facilities that can be represented by a point on a map, as provided by each of the participating jurisdictions in this Plan. The Steering Committee chose to not include the detailed CFI data with this Plan. Instead, they are secured and on file at Doña Ana County for use by the County and Steering Committee members in their respective hazard mitigation planning efforts.

Table 3-4: Critical facility and infrastructure counts by category and jurisdiction as of April 2012

Jurisdiction	Communications Infrastructure	Electrical Power Systems	Gas and Oil Facilities	Banking and Finance Institutions	Transportation Networks	Water Supply Systems	Government Services	Emergency Services	Educational [a]	Shelter and Evacuation Facilities [a]	Business [a]	Flood Control [a]
County-Wide Totals	**26**	**31**	**5**	**0**	**20**	**54**	**21**	**60**	**12**	**16**	**6**	**2**
Anthony	3	3	0	0	1	0	1	2	0	0	0	0
Hatch	0	1	0	0	1	0	3	5	1	0	0	0
Las Cruces	11	17	0	0	7	40	8	26	2	10	0	0
Mesilla	0	0	0	0	1	4	1	1	3	1	0	2
NMSU	4	4	5	0	0	9	0	3	5	5	5	0
Sunland Park	0	1	0	0	0	1	2	3	1	0	0	0
Unincorporated Doña Ana County	8	5	0	0	10	0	6	20	0	0	1	0

NOTES: a – CFI listed under these categories have been determined to be critical per the definition of this Plan by the corresponding jurisdiction .

It should be noted that the facility counts summarized in Table 3-4 do not represent a comprehensive inventory of all the category facilities that exist within the County. They do

represent the facilities inventoried to-date by each jurisdiction and are considered to be a work-in-progress that is anticipated to be expanded and augmented with each Plan cycle.

The EBID provided a GIS dataset that delineates all of the water delivery and removal system elements. Per that dataset, EBID has approximately 373.7 miles of canal/laterals and approximately 250 miles of drains/wasteways.

3.2.4 Loss Estimations

In the 2004 Plan, losses were estimated by either quantitative or qualitative methods. Quantitative loss estimates were derived using estimated exposure counts and the application of an assumed loss to exposure ratio. All of the 2004 Plan CFIs were assumed to be equally exposed to the various hazards. Dollar losses were only estimated for CFIs while all other assets (general residential, commercial, and industrial structures and population) were evaluated only for exposure.

Loss estimates for this Plan will be similar in scope and detail to the 2004 Plan, but will reflect current hazard map layers, an updated CFI database, and the use of Census 2010 block level data for estimating the human and residential structure impacts wherever possible. No industrial or commercial unit estimates are made, due to the lack of data at this time. The procedures for developing loss estimates are discussed below.

Economic loss and human exposure estimates for each of the final hazards identified in Section 3.1 begins with an assessment of the potential exposure of critical infrastructure, human populations, and residential structures to those hazards. Estimates of critical assets identified by each jurisdiction (see Table 3-4) are accomplished by intersecting the CFI inventory with the hazard profiles in Section 3.3. Human or population exposures are estimated by intersecting the same hazards with the 2010 Census block data population statistics.

Additional exposure and loss estimates for general residential buildings within the County were made using the residential housing counts reported in the 2010 Census data. Structure replacement costs for the residential housing counts were geographically assigned for two general areas within the County, the Las Cruces metropolitan area and the remainder of the County. An average housing unit value was estimated for each geographic region using data from the Doña Ana County Assessor's database and 2009 mean home values published online by City-Data.com. Average replacement costs for a residential home were estimated at $160,000 for the Las Cruces metropolitan area and $90,000 for the remainder of the County. Content value for these buildings were assumed to equal 50% of the replacement cost.

Combining the exposure and/or loss results from the CFI and 2010 Census database provides a comprehensive depiction of the overall exposure of critical facilities, human population, and residential building stock and the two datasets are considered complimentary and not redundant.

For EBID facilities, replacement costs for delivery canals and laterals were estimated to be $40 per lineal foot. Drain and wasteway replacement costs were estimated at $25 per lineal foot.

Economic losses to structures and facilities are estimated by multiplying the exposed facility replacement cost estimates by an assumed loss to exposure ratio for the hazard. The loss to exposure ratios used in this Plan are summarized by hazard in Section 3.3. It is important to note the following when reviewing the loss estimate results:

- The loss to exposure ratios are subjective and the estimates are solely intended to provide an understanding of relative risk from the hazards and potential magnitude of losses.
- Potential losses reported in this Plan represent an inherent assumption that the hazard occurs county-wide to the magnitude shown on the hazard profile map. The results are intended to present a county-wide loss potential. Any single hazard event will likely only impact a portion of the county and the actual losses would be some fraction of those estimated herein.
- No attempt has been made at developing annualized loss estimates, unless otherwise noted in Section 3.3

It is also noted that uncertainties are inherent in any loss estimation methodology due to:

- Incomplete scientific knowledge concerning hazards and our ability to predict their effects on the built environment;
- Approximations and simplifications that are necessary to perform a comprehensive analysis economically; and,
- Lack of detailed data necessary to implement a viable statistical approach to loss estimations.

Several of the hazards profiled in this Plan will not include quantitative exposure and loss estimates. The vulnerability of people and assets associated with some hazards are nearly impossible to evaluate given the uncertainty associated with attempting to specify a geospatial correlation of the hazard event and loss potential without sufficient data to justify the estimation of geographically varied damages. Instead, a qualitative review of vulnerability will be discussed to provide insight to the nature of losses that are associated with the hazard. For subsequent updates of this Plan, the data needed to evaluate these unpredictable hazards may become refined such that comprehensive vulnerability statements and thorough loss estimates can be made

3.2.5 Development Trend Analysis

The 2004 Plan development trend analysis will require updating to reflect growth and changes in Doña Ana County and jurisdiction boundaries over the last planning cycle. The updated analysis will focus on the potential risk associated with projected growth patterns and their intersection with the Plan identified hazards. Refer to Section 1.6 for general growth and development trend discussions for each jurisdiction.

3.3 Hazard Risk Profiles

The following sections summarize the risk profiles for each of the Plan hazards identified in Section 3.1. For each hazard, the following elements are addressed to present the overall risk profile:

- **Description**
- **History**
- **Probability**
- **Extent/Magnitude**
- **Vulnerability**
- **Sources**
- **Profile Maps (if applicable)**

Much of the 2004 Plan data has been updated, incorporated and/or revised to reflect current conditions and Steering Committee changes, as well as an overall plan format change. County-wide and jurisdiction specific profile maps are provided at the end of the section (as applicable) to enhance the understanding of geographic limits to hazard impacts. It is also noted that the maps are not included in the page count of this document.

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3.3.1 Dam Failure

Description

A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam impounds water in the upstream area, or reservoir, and the volume of storage is usually measured in acre-feet (the volume of water that covers an acre of land to a depth of 1 foot).

The primary risk associated with dam failure in Doña Ana County is the inundation of downstream facilities and population by the resulting flood wave. Dams within or impacting Doña Ana County can generally be divided into two groups: (1) storage reservoirs designed to impound and store water, provide flood protection, and possibly generate power, and (2) single purpose flood retarding structures (FRS) designed to attenuate or reduce flooding by impounding stormwater for relatively short durations of time during flood events. Most dams are equipped with an emergency spillway, which provides a designed and protected outlet to convey runoff volumes exceeding the dam's storage capacity during extreme or back-to-back storm events. Dam failures may be caused by a variety of reasons including: seismic events, extreme wave action, leakage and piping, overtopping, material fatigue and spillway erosion.

Federal dam owners are required to obtain a permit for a new dam; however, the Office of the State Engineer by law does not regulate federal dams. Dams 10 feet or less in height or dams that store 10 acre-feet or less, are generally not regulated and are considered non-jurisdictional dams. However, if a non-jurisdictional dam threatens life and property due to an unsafe condition, the state engineer can issue a safety order to the owner requiring action to remove the threat.

History

There is no documented history of a major dam failure within Doña Ana County.

Probability

The probability dam failures is difficult to quantify due to numerous factors that may cause a dam to fail. The magnitude of a dam failure is normally an estimate of discharge and can vary greatly with each dam. Factors impacting the probability and magnitude of dam failure are directly influenced by the type and age of the dam, its operational purpose, storage capacity and height, downstream conditions, hydrologic conditions as the time of failure, and many other factors. There are two sources of data that publish hazard ratings for dams impacting Doña Ana County. The first is the New Mexico Office of the State Engineer Dam Safety Bureau (OSEDSB) and the second is the National Inventory of Dams (NID). Hazard ratings from each source are based on an assessment of the consequence of failure and/or dam safety considerations, and they are not tied to probability of occurrence.

The OSEDSB ensures that dams in New Mexico are designed, constructed, operated, and maintained safely to prevent dam failures. Dams that equal or exceed 25 feet in height and 15 acre-feet of storage, or dams that equal or exceed 50 acre-feet storage and six (6) feet in height, are under the jurisdiction of the State Engineer. In addition, a permit is required

from the State Engineer for the construction of any dam that exceeds 10 feet in height and/or 10 acre-feet of water storage.

The OSEDSB assigns a hazard potential classification to each jurisdictional dam. The rating is based on the potential consequences of failure and the corresponding loss of life, damage to property and environmental damage that is likely to occur in the event of dam failure. No allowances for evacuation or other emergency actions by the population are considered and the hazard potential classification is not a reflection of the condition of the dam. The three hazard ratings used are:

- **LOW**: Dams assigned the low hazard potential classification are those dams where failure or improper operation results in no probable loss of life and low economic or environmental losses. Losses are principally limited to the dam owner's property.
- **SIGNIFICANT**: Dams assigned the significant hazard potential classification are those dams where failure or improper operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in populated areas with significant infrastructure.
- **HIGH**: Dams assigned the high hazard potential classification are those dams where failure or improper operation will probably cause loss of human life.

The responsibilities of the OSEDSB include inspecting existing dams to verify they are operated and maintained in a safe condition. The bureau reviews plans and specifications for new dams, and modifications and repairs to existing dams, to ensure compliance with State Engineer design criteria. The bureau also inspects construction to verify the dams are built or repaired in accordance with the plans on file with the State Engineer. The State Engineer classifies all regulatory dams in the state into one of the following dam safety categories:

- **SATISFACTORY** – No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions in accordance with state engineer's rules and regulations for dams or tolerable risk guidelines.
- **FAIR** – No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.
- **POOR** – A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A POOR condition is used when uncertainties exist as to critical analysis parameters, which identify a potential dam safety deficiency. Further investigations and studies are necessary.
- **UNSATISFACTORY** – A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

It is important to note that the hazard potential classification is an assessment of the *consequences* of failure, but not an evaluation of the *probability* of failure or improper operation. As of March 2012, there are currently 43 dams within Doña Ana County that are

jurisdictional and regulated by the OSEDSB. Of those 43 dams, 26 are classified as HIGH hazard potential, 13 are classified as SIGNIFICANT, and the rest are LOW. The location and classification type of these dams within Doña Ana County are shown on Maps 1A through 1F.

The NID database contains information on approximately 77,000 dams in the 50 states and Puerto Rico, with approximately 30 characteristics reported for each dam, such as: name, owner, river, nearest community, length, height, average storage, max storage, hazard rating, Emergency Action Plan (EAP), latitude, and longitude. Each dam in the NID database is classified as either low, significant, or high hazard based on substantially the same criteria used by OSEDSB.

Federal dams are generally not regulated by the OSEDSB, but are maintained and inspected by the constructing agency. The two federal dams impacting Doña Ana County are Elephant Butte and Caballo Dams. Both are constructed on and impound waters of the Rio Grande and both are located north of the County, with Caballo Dam being the nearest. Both dams are owned, maintained and operated by the U.S. Bureau of Reclamation (USBR), and are classified as HIGH hazard dams. The USBR has also developed emergency action plans for both dams.

Doña Ana County Flood Commission maintains a database of 71 dams located within the County. All are flood retarding structures that are specifically designed to control flooding and sediment, and some are jurisdictional per OSEDSB. Of all the dams in the DACFC database, only the Las Cruces Flood Control Dam has an emergency action plan.

Extent/Magnitude

The extent magnitude of impacts due to dam failure are usually depicted by mapping the estimated downstream inundation limits and performing an assessment that is based on a combination of flow depth and velocity. The dam failure inundation limits prepared for Caballo Dam (USBR, 1999) were scanned and digitized into a GIS shapefile for use in the vulnerability analysis. The inundation mapping for the Las Cruces Flood Control Dam (LCFCD) was not available for use with this analysis, but will be incorporated with the next Plan update. No other inundation mapping was available that was not redundant. Non-disclosure agreements between the County and USBR prohibit the production of maps showing th3e Caballo Dam failure inundation limits within this document, however maps are on file at the Doña Ana County Office of Emergency Management. The Caballo Dam failure inundation limits generally follow the Rio Grande geologic floodplain and are classified herein as a HIGH hazard area. All other areas are classified as a LOW hazard. Workmaps of the inundation limits were prepared and reviewed by the Steering Committee to assess vulnerability and exposure of CFI and population centers. It is also clearly understood by the Steering Committee that there are potentially HIGH hazard inundation limits downstream of all 71 dams currently in the DACFC database. Those limits have not been delineated at this time, however, they are being considered as a potential mitigation action item.

Maps 1A through 1F depict the location of all 71 dams included in the DACFC database, within the County, to provide a perspective of the potential areas downstream that may be impacted by a dam failure. Dam symbols are attributed to indicate their OSEDSB hazard classification and jurisdictional status.

The extent of dam failure is represented by the inundation mapping previously discussed. The magnitude of depths and velocities are usually determined through a combination of hydrologic and hydraulic evaluations and plotted on maps that are typically used for emergency action planning and development planning. As previously discussed, the only dam failure inundation mapping currently available in the county were prepared for Caballo Dam and the Las Cruces Flood Control Dam. Depths of flooding within those inundation areas vary with distance from the dam and geometry of the conveyance corridor. In general, depths and velocities are greatest in the reaches immediately downstream of the dam, and gradually dissipate with attenuation as the floodwave progresses downstream. The volume of stored flows greatly impacts the extent and duration of the floodwave as well. For example, the floodwave released from a failure of Caballo Dam is much longer in duration than the floodwave for the LCFCD. The following is a summary of the range of maximum flooding depths predicted for communities impacted by a Caballo Dam failure. In general, the maximum flow depths are estimates at the upstream and downstream limits of the jurisdiction, and are measured from the regular water surface elevation of the Rio Grande depicted on the USGS quadrangle maps. For the EBID and unincorporated county, the range of depths varies greatly due to the large geographic variability. The reader is referred to the original USBR inundation mapping (USBR, 1999) for greater detail:

Participating Jurisdiction	Range of Maximum Depths, in feet
Anthony	N/A
EBID	42 to 5
Hatch	17 to 18
Las Cruces	9 to 10
Mesilla	9
NMSU (Hatch Campus Only)	17 to 18
Sunland Park	10 to 15
UnincorporatedDoña Ana County	42 to 5

Depth information for the LCFCD inundation mapping was not available at the time of this plan, but will be added with subsequent updates. In general, the extent for LCFCD will be limited to Las Cruces, between the dam and the Rio Grande.

In summary, all jurisdictions contain, or are located downstream of, either a flood retarding structure or the Caballo Dam and are therefore at least partially exposed to potential inundation by a dam failure event. Nearly all of the flood retarding structures do not have defined inundation limits, so it is not possible at this time to estimate the percentage of exposure.

Vulnerability – CPRI Results

Dam failure CPRI results for each jurisdiction are summarized in Table 3-5.

Table 3-5: CPRI results by jurisdiction for dam failure

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration	CPRI Score
Anthony	Unlikely	Negligible	< 6 hours	< 6 hours	1.45
EBID (Elephant Butte and Caballo Dams)	Unlikely	Catastrophic	6-12 hours	> 1 week	2.20
EBID (Flood Control Dams)	Likely	Critical	< 6 hours	< 1 week	3.15
Hatch	Unlikely	Critical	< 6 hours	< 1 week	2.25
Las Cruces	Unlikely	Negligible	6-12 hours	< 24 hours	1.40
Mesilla	Unlikely	Catastrophic	6-12 hours	< 6 hours	2.20
NMSU	Unlikely	Critical	6-12 hours	> 1week	2.35
Sunland Park	Unlikely	Negligible	12-24 hours	< 24 hours	1.25
Unincorporated Doña Ana County	Unlikely	Limited	6-12 hours	< 24 hours	1.70
				County-wide average CPRI =	**1.99**

Vulnerability – Loss Estimations

The estimation of potential losses due to inundation from a dam failure was accomplished by intersecting the human and facility assets with the inundation limits for the Caballo Dam failure. As stated previously, delineated dam failure inundation limits were not available for the 71 other dams located in the County. Therefore, the results of this analysis are expected to underestimate the exposure of people and infrastructure to dam failure within Doña Ana County.

Since no common methodology is available for obtaining losses from the exposure values, estimates of the loss-to-exposure ratios were assumed based on the perceived potential for damage. Any storm event, or series of storm events of sufficient magnitude to cause a dam failure scenario, would have potentially catastrophic consequences in the inundation area. Floodwaves from these types of events travel very fast and possess tremendous destructive energy. Accordingly, an average event based loss-to-exposure ratio for the inundation areas with a HIGH hazard rating are estimated to be 0.50 or a 50% loss. Low rated areas are zero. Table 3-6 summarizes exposure and loss estimations for dam failure. In summary, $38.8 million in CFI related losses are estimated for dam failure inundation for all the participating jurisdictions in Doña Ana County. An additional $570 million in losses to Census 2010 estimated residential structures is estimated for all participating Doña Ana County jurisdictions. Regarding human vulnerability, a total population of 21,194 people, or 10.13% of the total Doña Ana County population, is potentially exposed to a dam failure inundation event. The potential for deaths and injuries are directly related to the warning time and type of event. Given the magnitude of such an event(s), it is realistic to anticipate at least one death and several injuries. There is also a high probability of population displacement for most of the inhabitants within the inundation limits downstream of the dam(s). For EBID facilities, Table 3-7 summarizes the length of exposed facilities and estimated losses for dam failure, flooding, and wildfire hazards. Flooding and wildfire hazards will be discussed in later sections.

Table 3-6: Doña Ana County jurisdictional exposure and loss estimates due to dam failure

DAM FAILURE HAZARD EXPOSURE / LOSS	Anthony	Hatch	Las Cruces	Mesilla	NMSU	Sunland Park	Uninc. Doña Ana County	Total
Total Critical Facilities and Infrastructure	**10**	**11**	**121**	**13**	**40**	**8**	**50**	**253**
Estimated Replacement Cost (x $1,000)	**$37,505**	**$14,250**	**$765,525**	**$124,520**	**$811,777**	**$16,950**	**$1,405,806**	**$3,176,333**
Facilities Exposed to HIGH Hazard	2	10	3	1	0	3	10	29
Percentage of Total Facilities	20.00%	90.91%	2.48%	7.69%	0.00%	37.50%	20.00%	11.46%
Estimated Replacement Cost (x $1,000)	$24,000	$11,250	$13,000	$3,000	$0	$4,900	$21,500	$77,650
Estimated Structure Loss (x $1,000)	$12,000	$5,625	$6,500	$1,500	$0	$2,450	$10,750	$38,825
Total Population	**9,403**	**1,679**	**97,571**	**1,944**	**4,542**	**14,274**	**79,815**	**209,229**
Population Exposed to HIGH Hazard	203	1,677	7	237	0	2,229	16,841	21,194
Percent Exposed	2.16%	99.91%	0.01%	12.21%	0.00%	15.61%	21.10%	10.13%
Population Over 65	**801**	**168**	**13,316**	**439**	**58**	**1,254**	**9,844**	**25,881**
Population Over 65 Exposed to HIGH Hazard	15	168	1	55	0	195	2,298	2,733
Percent Exposed	1.86%	100.00%	0.01%	12.44%	0.00%	15.55%	23.34%	10.56%
Residential Building Count Totals)	**2,803**	**566**	**42,352**	**950**	**1,356**	**4,109**	**29,354**	**81,490**
Estimated Replacement Cost (x $1,000)	**$378,421**	**$76,437**	**$10,163,529**	**$228,050**	**$324,498**	**$554,713**	**$5,422,534**	**$17,148,181**
Residences Exposed to HIGH Hazard	61	566	3	105	0	714	6,219	7,667
Percentage of Total Facilities	2.18%	99.97%	0.01%	11.05%	0.00%	17.36%	21.19%	9.41%
Estimated Replacement Cost (x $1,000)	$8,250	$76,411	$709	$25,203	$0	$96,323	$934,613	$1,141,509
Estimated Structure Loss (x $1,000)	$4,125	$38,206	$354	$12,602	$0	$48,161	$467,306	$570,755

Table 3-7: EBID critical facilities and infrastructure exposure and loss estimates

EBID Facility Type	Total System Length (miles)	Impacted Length (miles)	Percent Impacted (%)	Estimated Unit Loss ($ per mile)	Total Estimated Loss (x $1,000)
Dam Failure - HIGH Hazard					
Canal / Lateral	373.7	267.4	71.55	$105,600	$28,237
Drains / Wasteways	275.0	231.9	84.33	$66,000	$15,305
Flood - HIGH Hazard					
Canal / Lateral	373.7	20.8	5.56	$105,600	$2,194
Drains / Wasteways	275.0	32.4	11.78	$66,000	$2,138
Flood - MEDIUM Hazard					
Canal / Lateral	373.7	105.1	28.12	$42,240	$4,439
Drains / Wasteways	275.0	97.3	35.38	$26,400	$2,569
Wildfire - HIGH Hazard					
Canal / Lateral	373.7	0.8	0.22	$42,240	$35
Drains / Wasteways	275.0	1.1	0.40	$26,400	$29
Wildfire - MEDIUM Hazard					
Canal / Lateral	373.7	158.0	42.27	$10,560	$1,668
Drains / Wasteways	275.0	116.8	42.47	$6,600	$771

Assumptions:
- Canal / Lateral Average Replacement Cost = $40 per foot
- Drain / Wastewater Average Replacement Cost = $25 per foot
- Dam Failure and HIGH Hazard Flood losses estimated to be 50% of replacement cost
- MEDIUM Hazard Flood and HIGH Hazard Wildfire losses estimated to be 20% of replacement cost
- MEDIUM Hazard Wildfire losses estimated to be 5% of replacement cost
- No significant losses from Wildfire except in the form of increased runoff from adjacent watersheds

Vulnerability – Development Trend Analysis

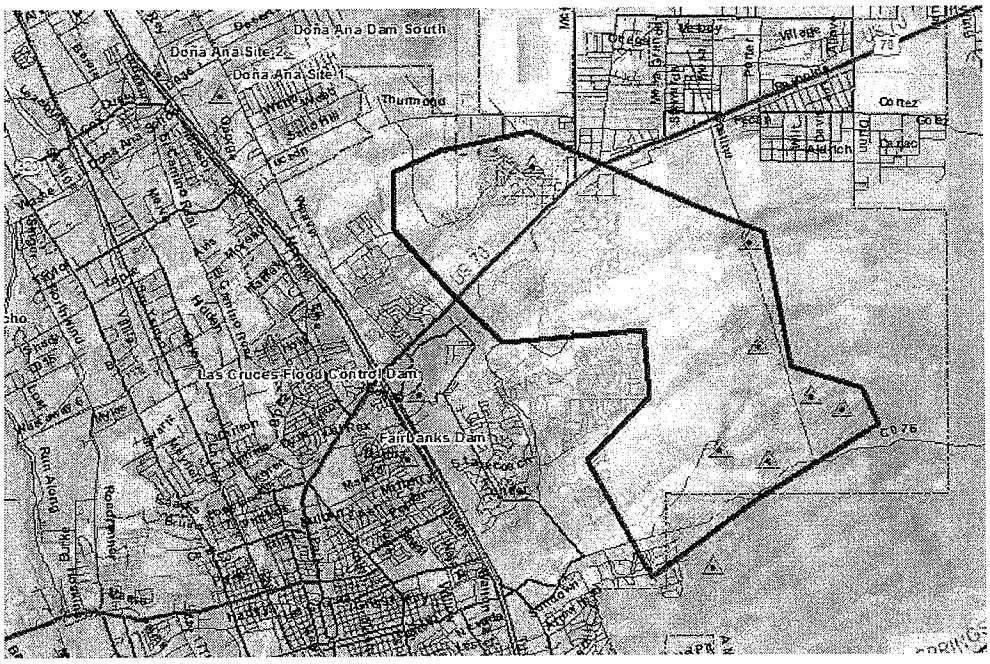
In general, new development within known dam failure inundation zones should be carefully evaluated by each jurisdiction to ensure that overland pathways are maintained through developments for potential breach flows or emergency spillway releases. It is not unusual for development to encroach downstream of flood retarding structures due to the reduction in flood flows and the perception that no protection is needed. Specific trend analysis for each jurisdiction are summarized below:

Anthony – The City has two small flood retarding dams located upstream of its boundaries that may impact the City should they fail (see Map 1E), and is generally not located within the Caballo Dam failure inundation limits except for the extreme western edge along State Highway 478. A failure of the Breedlove structure could exasperate flooding along the northern end of the City and possibly impact the commercial growth area identified in Figure 1-11.

EBID – A major portion of EBID's facilities and service area are located within the Caballo Dam failure inundation limits. In addition, many of the arroyos draining to the Rio Grande geologic floodplain cross EBID facilities. The District is working to maintain 27 flood retarding structures that are located within the EBID boundaries and is hoping to begin rehabilitation of many of the aging structures.

Hatch – The majority of Hatch is located within the dam failure inundation limits of Caballo Dam and any future development will need to take into account the potential limits.

Las Cruces – Several of the City's projected growth areas are situated downstream of flood retarding structures, and in particular the area east of I-25 as shown in the following illustration.



The hatched area represents areas identified for future development that may also be impacted potential dam failure issues with the several dams located in the area.

Mesilla – Little growth is anticipated for Mesilla over the next five years. Much of the Town is located within the Caballo Dam failure inundation limits and any future development should at least be made aware of the hazard.

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NMSU – The main campus of NMSU is situated directly downstream of the high hazard Tortuga Site 1 Dam, which has sizeable emergency spillway and tributary watershed. The potential path of a dam failure or emergency spillway discharge would carry the flows through the middle of the main campus on the northern edge of the Arrowhead Park industrial development area as indicated in the following illustration. Any future designs of that area should include provisions for ensuring a pathway for the potential emergency spillway discharges.

Sunland Park – The City's growth areas identified in Figure 1-17 are not subject to any identifiable dam failure hazards.

Unincorporated County – As with the other communities, the identified growth areas for the unincorporated areas of the County may intersect or lie within potential dam failure inundation limits. Future development should consider maintaining pathways for flows exceeding the capacity of the flood retarding structures. Also, the County is actively working towards mapping the downstream dam failure inundation limits for the dams within its jurisdiction, to provide guidance and tools in better understanding the potential risks.

Vulnerability – Jurisdictional Summary

The following crosswalk presents an overall summary of each jurisdiction's vulnerability to Dam Failure.

Jurisdiction	Vulnerability Rating	Mitigation Priority?	Notes
Anthony	Moderate	Yes	Anthony is located downstream of two flood retarding structures that could potentially impact the City should they fail. There is negligible exposure to a Caballo Dam failure. The probability of a failure of the flood retarding structures is low, but should an event occur, it could have a moderate impact on the City.
EBID	High	Yes	Nearly all of EBID facilities are located within a delineated dam failure inundation zone or are protected by small flood retarding dams. A single failure of any of these structures could have a devastating impact on the EBID facilities.
Hatch	High	Yes	Nearly all of Hatch population and buildings are located within a delineated dam failure inundation zone or are protected by small flood retarding dams. A single failure of any of these structures could have a devastating impact on the Town.
Las Cruces	Moderate	Yes	Most of the City's exposure to dam failure is in areas downstream of earthen flood retarding structures (e.g. – Las Cruces Flood Control Dam), which only impacts a fraction of the City's population and assets. Since these structures only store water during flood events, their probability of catastrophic failure is relatively low.
Mesilla	Moderate	Yes	All of the Town's exposure to dam failure is within the Caballo Dam failure inundation limits, and is mostly agricultural areas, the Calle del Norte bridge, and approximately 11% of the residential structures. Given the low probability of a failure event at Elephant Butte or Caballo Dams, the vulnerability is only moderate.
NMSU	Moderate	Yes	The majority of NMSU population and assets are located on the main campus in Las Cruces which is downstream of Tortugas Site 1 Dam, which is a flood retarding structure. A failure would directly impact the southern portion of the campus the industrial complex.
Sunland Park	Moderate	Yes	The Rio Grande floodplain area is the only part of the City that is located within the Caballo Dam failure inundation limits. The City's municipal buildings and wastewater treatment plant are located within the dam failure hazard area, as well as approximately 17% of residential structures. Given the low probability of a failure event at Elephant Butte or Caballo Dams, and the City's location being almost 90 river miles downstream of Caballo Dam, the vulnerability is considered to be only moderate.

Jurisdiction	Vulnerability Rating	Mitigation Priority?	Notes
Uninc. Doña Ana County	Moderate	Yes	The majority of population and facilities within the unincorporated county area are located near the incorporated jurisdictions or along the Rio Grande valley. There are numerous flood retarding structures as well as the impact from Caballo Dam that could result in exposure to dam failure. Over 20% of the county's residential structures and 9 critical facilities including 3 fire departments, 4 major bridges, and electrical substation, and a sheriff's substation are located within the Caballo Dam failure inundation limits. The exposure to failure of the flood retarding structures is unknown at this time due to the lack of EAPs.

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Profile Maps

Maps 1A through 1F –Dam Location Maps-Countywide

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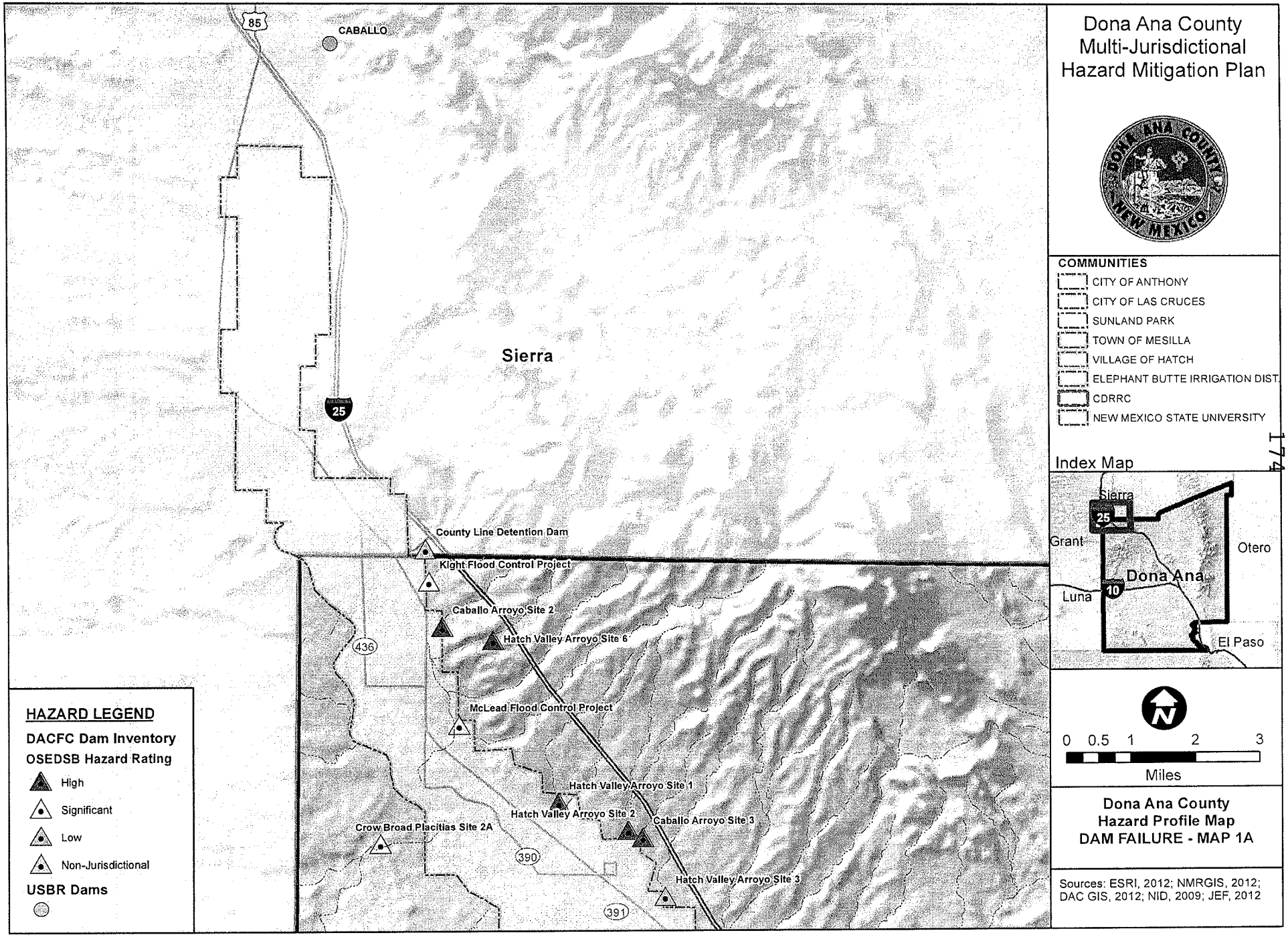
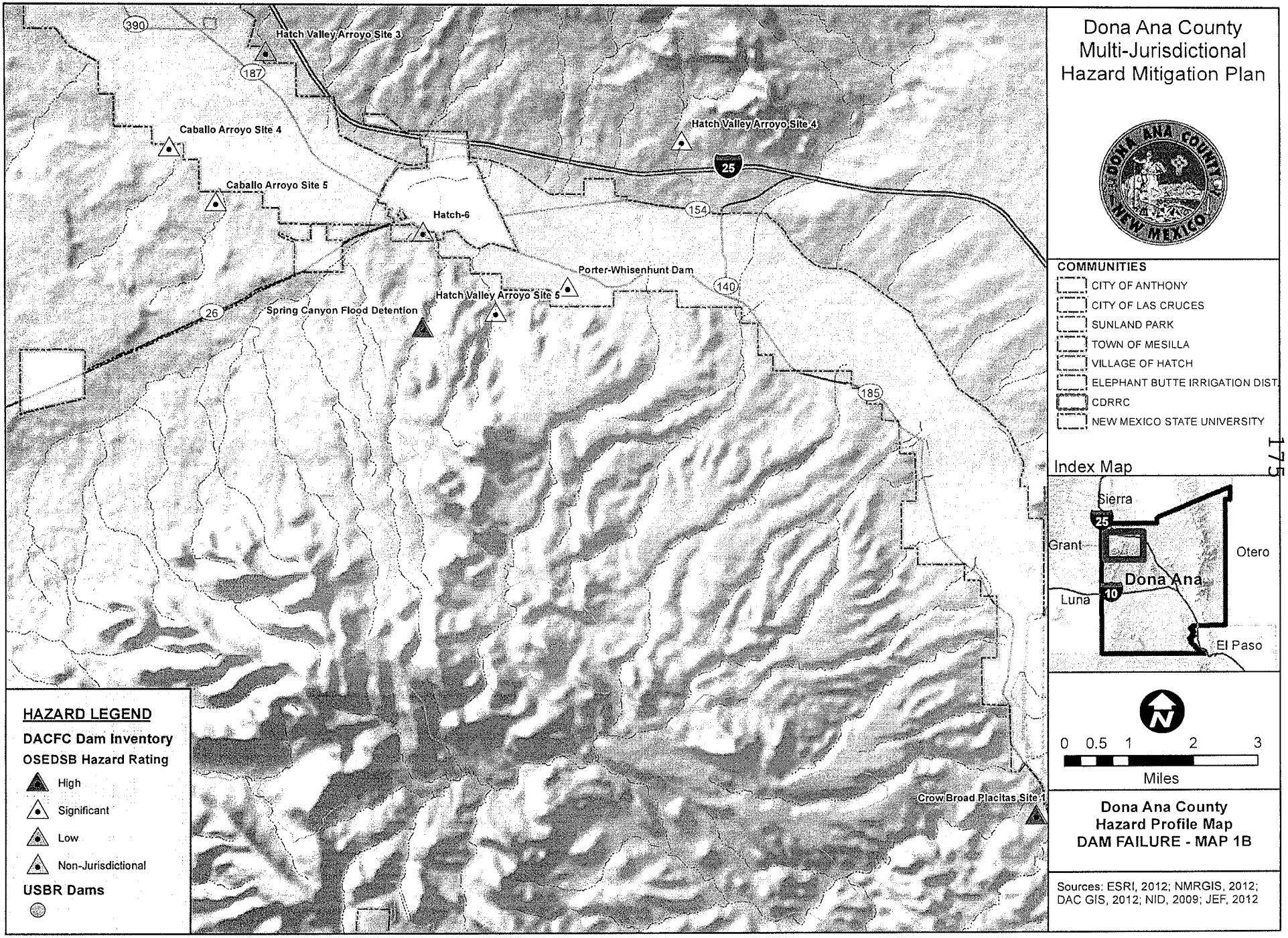

Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
NEW MEXICO STATE UNIVERSITY
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
CABALLO
Sierra
County Line Detention Dam
Kight Flood Control Project
Caballo Arroyo Site 2
Hatch Valley Arroyo Site 6
McLead Flood Control Project
Hatch Valley Arroyo Site 1
Hatch Valley Arroyo Site 2
Caballo Arroyo Site 3
Crow Broad Placitias Site 2A
Hatch Valley Arroyo Site 3
HAZARD LEGEND
DACFC Dam Inventory
OSEDSB Hazard Rating
High
Significant
Low
Non-Jurisdictional
USBR Dams
0 0.5 1 2 3
Miles
Dona Ana County
Hazard Profile Map
DAM FAILURE - MAP 1A
Sources: ESRI, 2012; NMRGIS, 2012;
DAC GIS, 2012; NID, 2009; JEF, 2012


Dona Ana County
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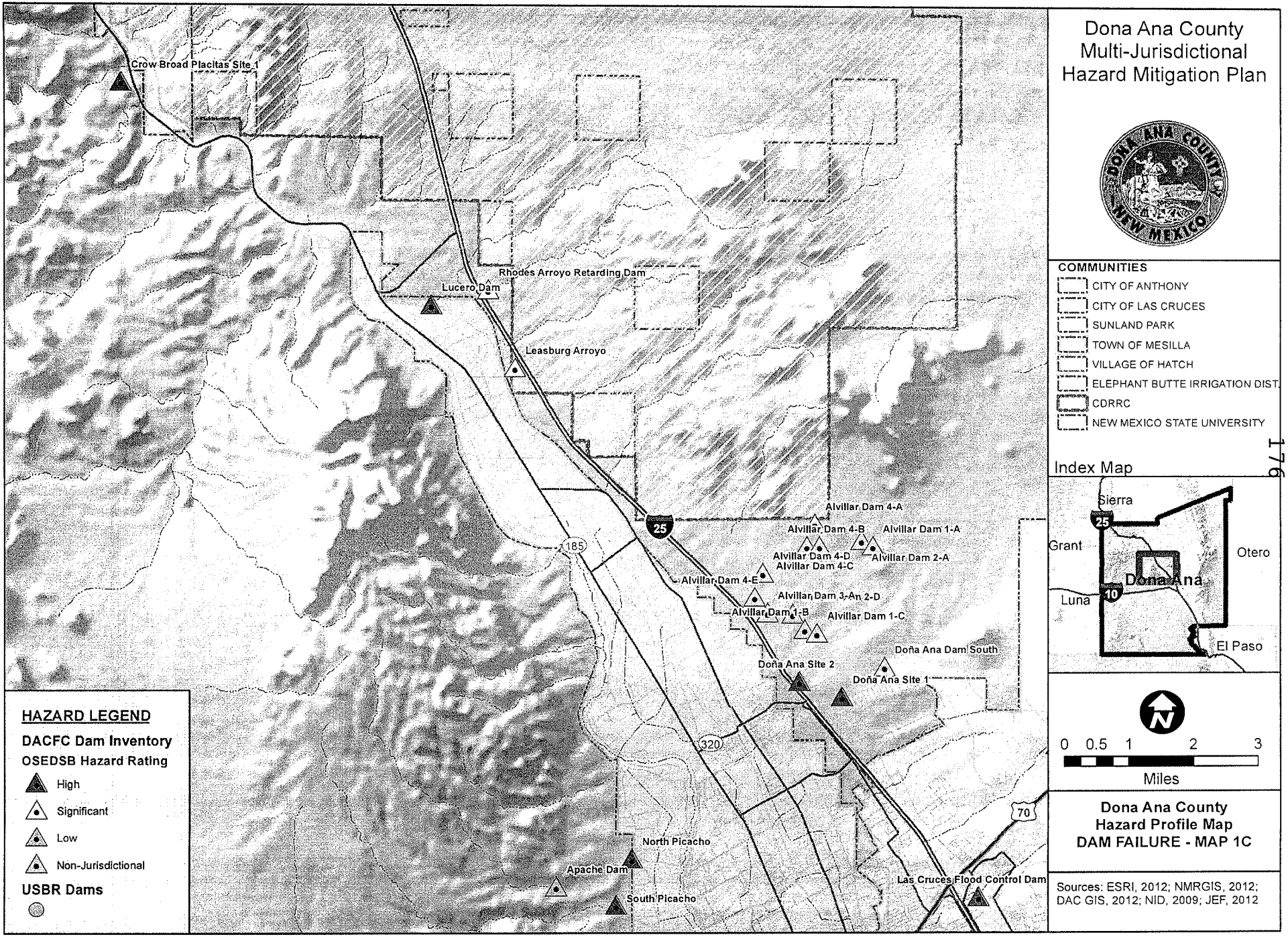
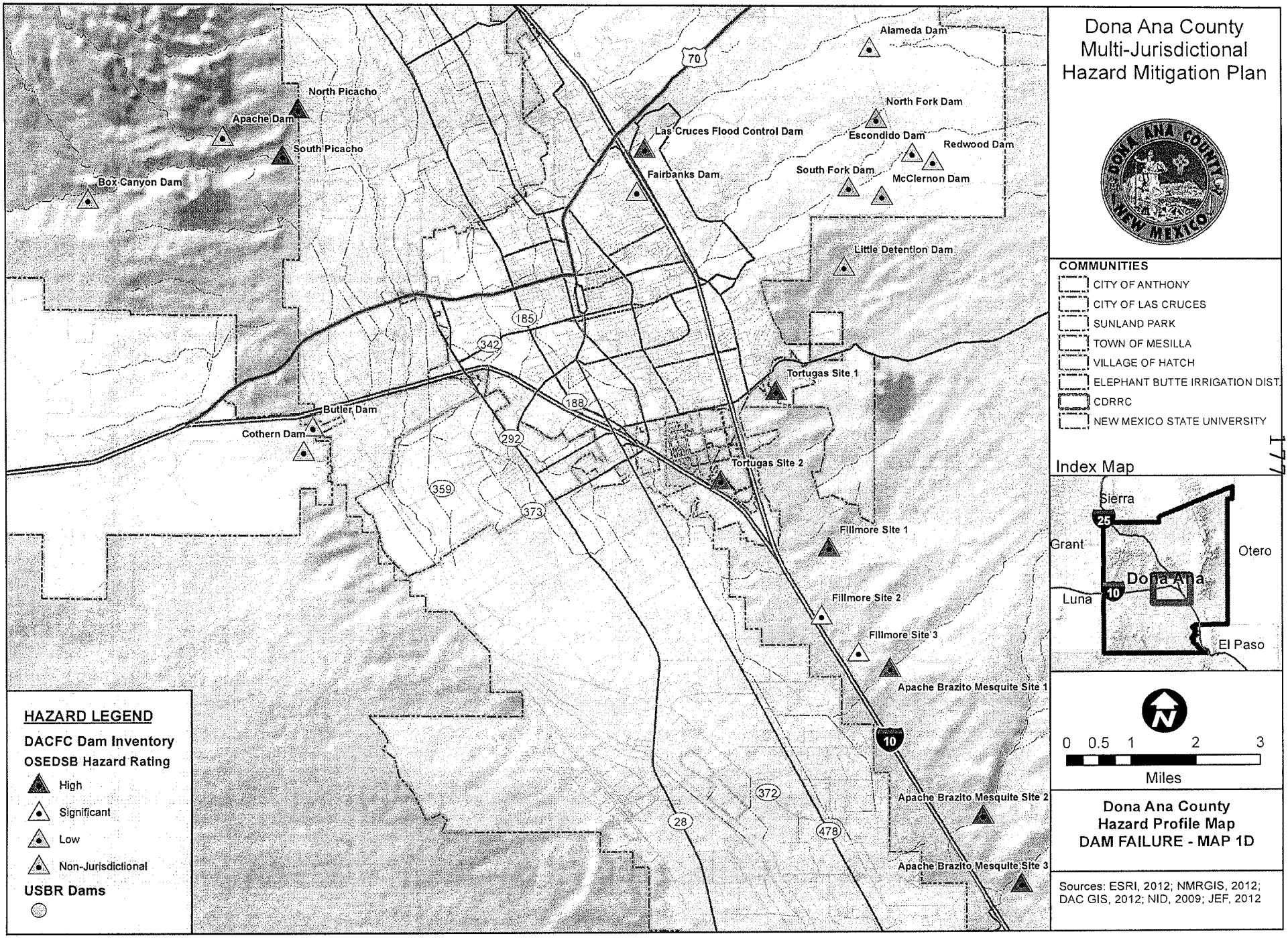
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
NEW MEXICO STATE UNIVERSITY
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 0.5 1 2 3
Miles
Dona Ana County
Hazard Profile Map
DAM FAILURE - MAP 1B
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NID, 2009; JEF, 2012
HAZARD LEGEND
DACFC Dam Inventory
OSEDSB Hazard Rating
High
Significant
Low
Non-Jurisdictional
USBR Dams
Hatch Valley Arroyo Site 3
Caballo Arroyo Site 4
Caballo Arroyo Site 5
Hatch-6
Hatch Valley Arroyo Site 4
Porter-Whisenhunt Dam
Hatch Valley Arroyo Site 5
Spring Canyon Flood Detention
Crow Broad Placitas Site 1
390
187
25
154
140
26
185


Crow Broad Placitas Site 1
Rhodes Arroyo Retarding Dam
Lucero Dam
Leasburg Arroyo
Alvillar Dam 4-A
Alvillar Dam 4-B
Alvillar Dam 1-A
Alvillar Dam 4-D
Alvillar Dam 2-A
Alvillar Dam 4-C
Alvillar Dam 4-E
Alvillar Dam 3-An 2-D
Alvillar Dam 1-B
Alvillar Dam 1-C
Doña Ana Dam South
Doña Ana Site 2
Doña Ana Site 1
North Picacho
Apache Dam
South Picacho
Las Cruces Flood Control Dam
25
185
320
70
HAZARD LEGEND
DACFC Dam Inventory
OSEDSB Hazard Rating
High
Significant
Low
Non-Jurisdictional
USBR Dams
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
NEW MEXICO STATE UNIVERSITY
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
25
10
0 0.5 1 2 3
Miles
Dona Ana County
Hazard Profile Map
DAM FAILURE - MAP 1C
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NID, 2009; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- CDRRC
- NEW MEXICO STATE UNIVERSITY

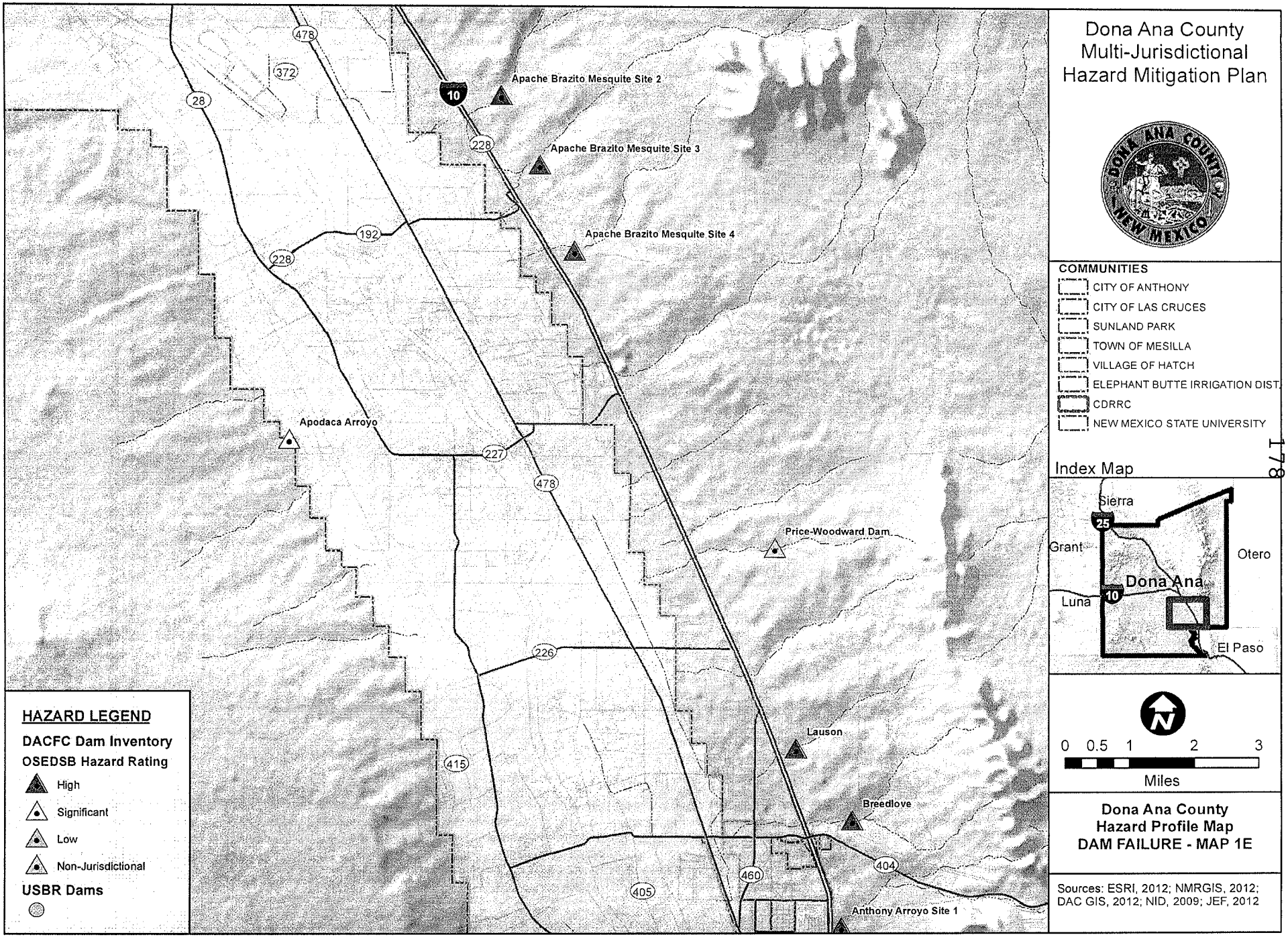
Index Map

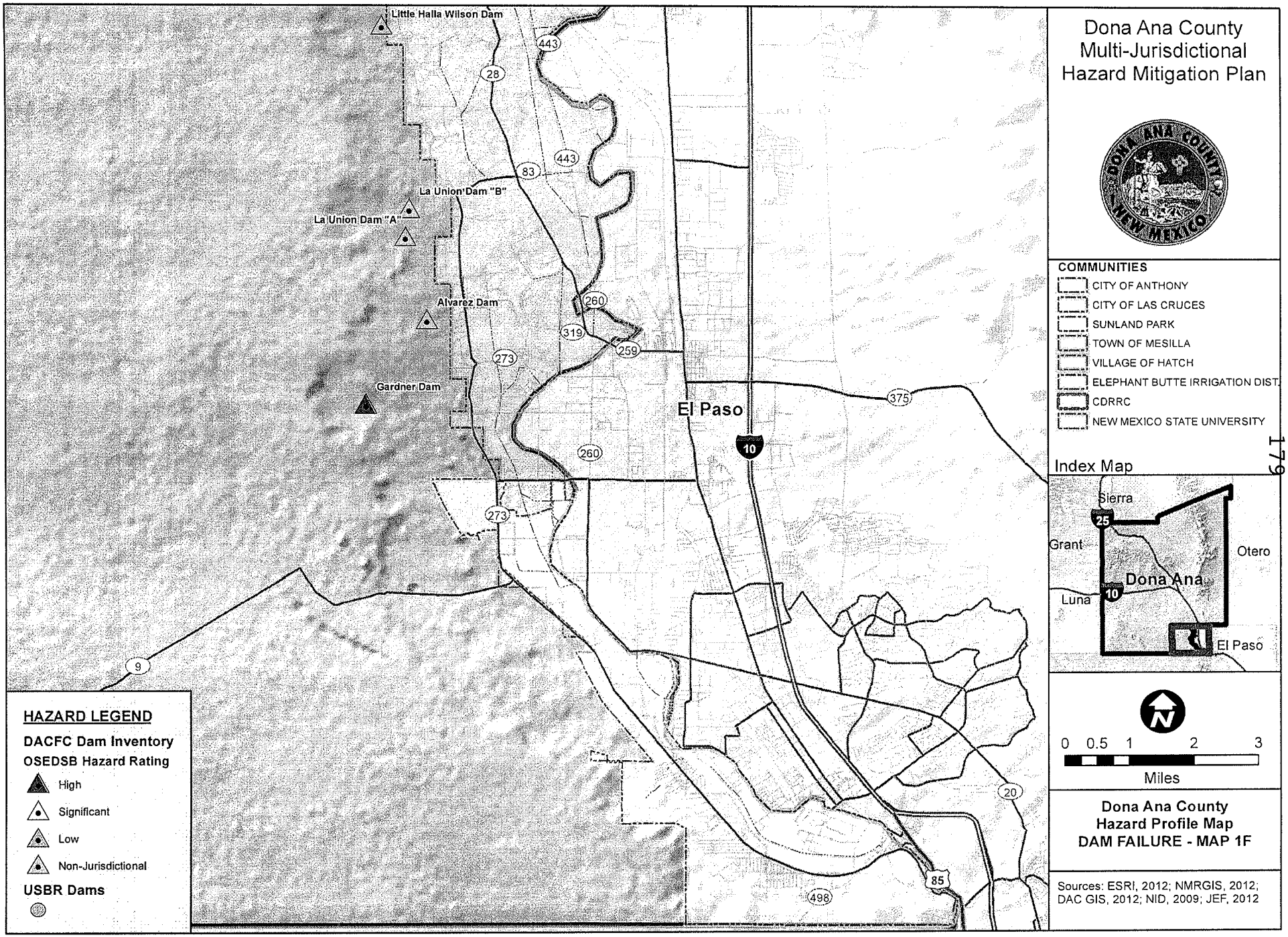
0 0.5 1 2 3

Miles

Dona Ana County Hazard Profile Map DAM FAILURE - MAP 1D

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NID, 2009; JEF, 2012


Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
NEW MEXICO STATE UNIVERSITY
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
HAZARD LEGEND
DACFC Dam Inventory
OSEDSB Hazard Rating
High
Significant
Low
Non-Jurisdictional
USBR Dams
Apache Brazito Mesquite Site 2
Apache Brazito Mesquite Site 3
Apache Brazito Mesquite Site 4
Apodaca Arroyo
Price-Woodward Dam
Lauson
Breedlove
Anthony Arroyo Site 1
0 0.5 1 2 3
Miles
Dona Ana County
Hazard Profile Map
DAM FAILURE - MAP 1E
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NID, 2009; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- CDRRC
- NEW MEXICO STATE UNIVERSITY

Index Map

0 0.5 1 2 3

Miles

Dona Ana County
Hazard Profile Map
DAM FAILURE - MAP 1F

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NID, 2009; JEF, 2012

3.3.2 Drought

Description

Drought is a normal part of virtually every climate on the planet, including areas of high and low rainfall. It is different from normal aridity, which is a permanent characteristic of the climate in areas of low rainfall. Drought is the result of a natural decline in the expected precipitation over an extended period of time, typically one or more seasons in length. The severity of drought can be aggravated by other climatic factors, such as prolonged high winds and low relative humidity (FEMA, 1997).

Drought is a complex natural hazard impacting many facets of our life and environment, as reflected in the following four definitions commonly used to describe it (NMDHSEM, 2010):

- **Meteorological** drought is defined by a period of substantially diminished precipitation duration and/or intensity. The commonly used definition of meteorological drought is an interval of time, generally on the order of months or years, during which the actual moisture supply at a given place consistently falls below the climatically appropriate moisture supply.
- **Agricultural** drought occurs when there is inadequate soil moisture to meet the needs of a particular crop at a particular time. Agricultural drought usually occurs after or during meteorological drought, but before hydrological drought and can affect livestock and other dry-land agricultural operations.
- **Hydrological** drought refers to deficiencies in surface and subsurface water supplies. It is measured as stream flow, snow pack, and as lake, reservoir, and groundwater levels. There is usually a delay between lack of rain or snow and less measurable water in streams, lakes, and reservoirs. Therefore, hydrological measurements tend to lag behind other drought indicators.
- **Socio-economic** drought occurs when physical water shortages start to affect the health, well-being, and quality of life of the people, or when the drought starts to affect the supply and demand of an economic product.

A drought's severity depends on numerous factors including duration, intensity, and geographic extent as well as regional water supply demands by humans and vegetation. Due to its multi-dimensional nature, drought is difficult to define in exact terms and also poses difficulties in terms of comprehensive risk assessments.

Drought differs from other natural hazards in three ways. First, the onset and end of a drought are difficult to determine due to the slow accumulation and lingering effects of an event after its apparent end. Second, the lack of an exact and universally accepted definition adds to the confusion of its existence and severity. Third, in contrast with other natural hazards, the impact of drought is less obvious and may be spread over a larger geographic area. These characteristics have hindered the preparation of drought contingency or mitigation plans by many governments.

Droughts may cause a shortage of water for human and industrial consumption, hydroelectric power, recreation, aquatic habitat and navigation. Water quality may also decline and the number and severity of wildfires may increase. Severe droughts may result

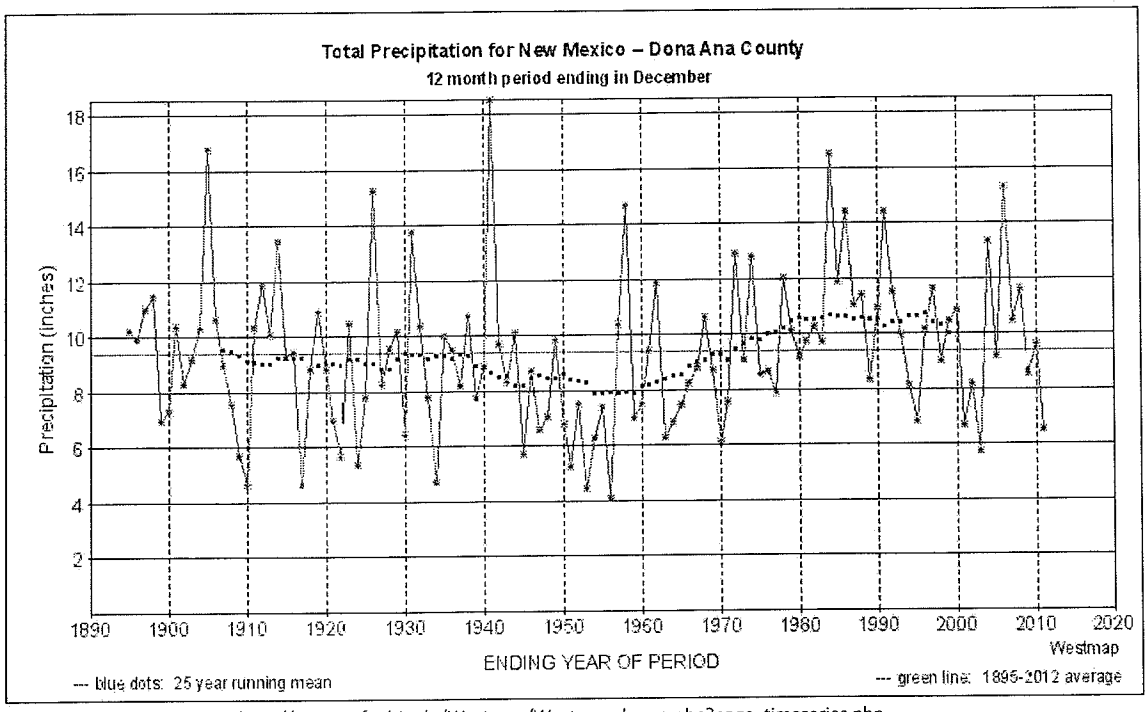
in the loss of agricultural crops, forest products and aquatic habitat, undernourished wildlife and livestock, lower land values, and higher unemployment.

History

Between 1995 and 2007, there were four state declared disasters for effects related to drought (NMDHSEM, 2010). The declarations, made in May 1996, May 2000, June 2002, and March 2006, were primarily for loss/conservation of domestic drinking water. The total direct cost incurred by the State for that time period was $279,459, however, indirect costs were estimated to be between $50-100 Million. In May 2012, the Governor issued the fifth drought state of emergency declaration, which authorized the continuation of the New Mexico Drought Task Force (NMDTF) for an additional two years and directed the State Engineer to convene the NMDTF to perform drought related assessments and make recommendation for intermediate and long-term strategies to mitigate drought conditions and impacts in the state. Doña Ana County was also included in USDA natural disaster declarations for drought and high winds in May 2005, August 2008, August 2009, and August 2011. For the period of 1995 to 2010, Doña Ana County farmers and ranchers received approximately $6.4 million in USDA disaster payments and subsidies (EWG, 2012). Of those, approximately $0.8 million were for livestock assistance and the rest for crop assistance. There is no data to directly correlate the disaster assistance to drought, however, given the USDA declarations previously listed, and the fact that County farmers and ranchers were also eligible for assistance under several other USDA declarations wherein the County was contiguous with another declared county, it seems reasonable to assume that at least a portion of the funds were for drought related impacts.

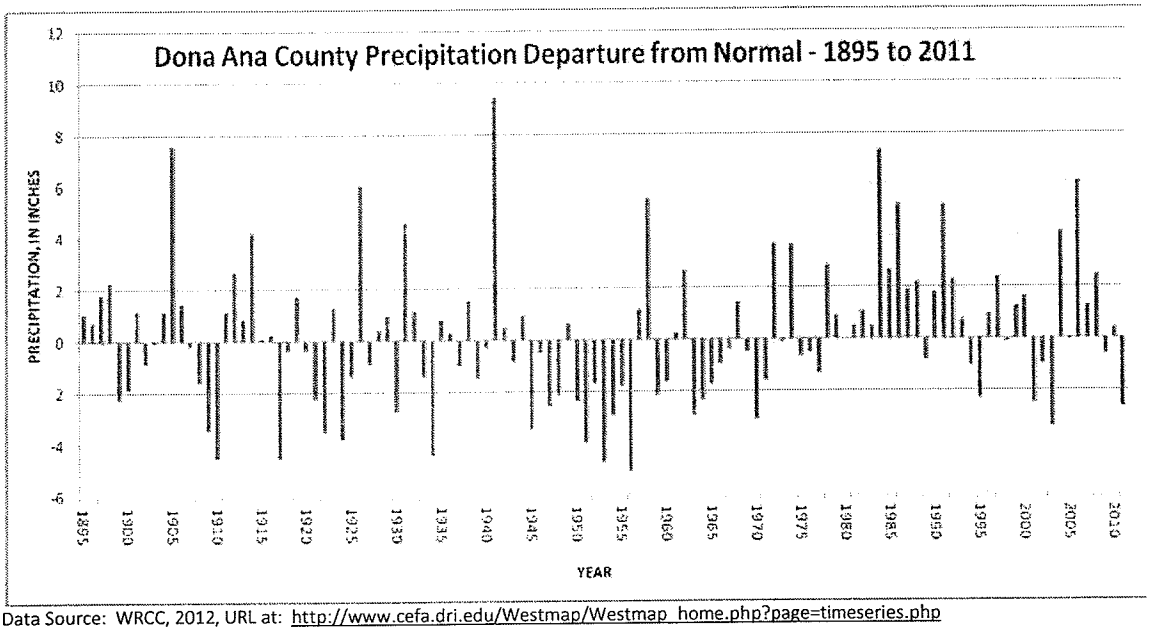
Figures 3-1 and 3-2 depict precipitation data from the Western Regional Climate Center (WRCC), WestMap Application showing annual statewide precipitation variances from normal and a running mean, for a period of 1895 to 2011. A significant period of below normal precipitation for the County occurred between 1945 and 1972. Over the last 10 years of data, the above and below precipitation months seem to be somewhat balanced.

Governor Bill Richardson created the current New Mexico Drought Task Force by Executive Order 2003-019 in the spring of 2003 (NMDTF) to oversee the implementation of drought-related activities in the State of New Mexico. The twelve-member Task Force is chaired by the State Engineer and includes Cabinet Secretaries from the Energy, Minerals and Natural Resources Department, Department of Environment, Department of Finance and Administration, Department of Agriculture, Department of Indian Affairs, Department of Tourism, and Economic Development Department; Executive Director of the New Mexico Finance Authority; Directors of the Interstate Stream Commission and the Office of Emergency Management of DPS; and the Director of Policy and Planning from the Office of the Governor. The history of the Drought Task force goes back to 1996, when Governor Gary Johnson created the NMDTF by Executive Order, with an original five-member Task Force chaired by the Cabinet Secretary of Energy, Minerals and Natural Resources and further comprise of three Cabinet Secretaries, the State Engineer, and a representative from the Office of the Governor. The New Mexico Drought Plan, Volumes I and II, were published in 2002 under Governor Johnson's leadership. This Task Force acts as a liaison between the drought work groups and the Office of the Governor. The NMDTF also assumes the lead role in intergovernmental drought response coordination and media information releases. The



Source: WRCC, 2012, URL at: http://www.cefa.dri.edu/Westmap/Westmap_home.php?page=timeseries.php

Figure 3-1: Annual precipitation variances from average and running mean based on 1895-2012 period.



Data Source: WRCC, 2012, URL at: http://www.cefa.dri.edu/Westmap/Westmap_home.php?page=timeseries.php

Figure 3-2: Average annual precipitation variances from a normal based on 1895 to 2011 period

last update to the New Mexico Drought Plan was in 2006 and the task force's last report was released in August 2008. New quarterly reports are expected following the May 2012 gubernatorial declaration and directives.

Probability

There is no commonly accepted return period or non-exceedance probability for defining the risk from drought (such as the 100-year or 1% annual chance of flood). There are, however, several sources for presenting indices of drought severity, that do use historic data and projected atmospheric conditions to estimate severity and potential future changes. Several of these are discussed in the following section

Extent/Magnitude

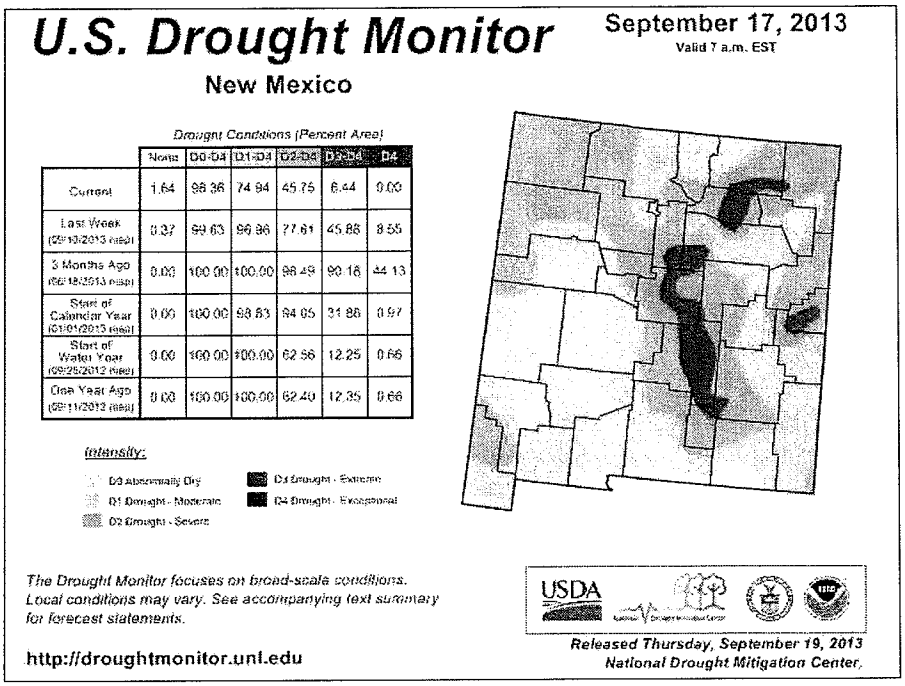
The extent or magnitude of drought is usually measured in time and the severity of the hydrologic deficit. There are several resources available to evaluate drought status and even project expected conditions for the very near future.

The National Integrated Drought Information System (NIDIS) Act of 2006 (Public Law 109-430) prescribes an interagency approach for drought monitoring, forecasting, and early warning (NIDIS, 2007). The NIDIS maintains the U.S. Drought Portal[31] which is a centralized, web-based access point to several drought related resources including the U.S. Drought Monitor (USDM) and the U.S. Seasonal Drought Outlook (USSDO). The USDM, shown in Figure 3-3, is a weekly map depicting the current status of drought and is developed and maintained by the National Drought Mitigation Center. The September 17, 2013 drought intensity for the majority of the County is estimated to be in the D0 or Abnormally Dry range. The extreme southern strip of the county (mostly Sunland Park area) is shown to have no drought conditions. The table in Figure 3-3 would also indicate that on a statewide basis, the drought conditions have become less intense over the last year.

The USSDO, shown in Figure 3-4, is a three month projection of potential drought conditions developed by the National Weather Service's Climate Prediction Center. The USSDO generally anticipates persistence for areas around the County and no drought for the majority of the county. Accordingly, the County can expect a USDM intensity of D0 or no drought at all through December 2013. The jurisdictions or entities of Las Cruces, Hatch, Mesilla, Anthony, Sunland Park, Elephant Butte Irrigation District and New Mexico State University can expect a USDM intensity of D0 to D4..

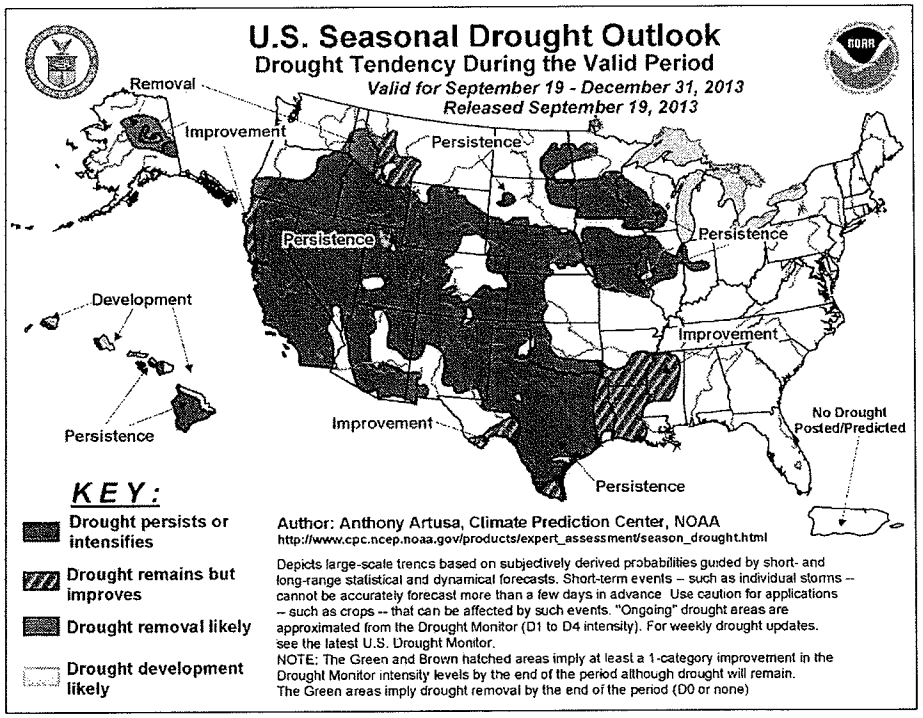
The Palmer Drought Severity Index (PDSI) is a commonly used index that measures the severity of drought for agriculture and water resource management. It is calculated from observed temperature and precipitation values and estimates soil moisture. However, the Palmer Index is not considered to be consistent enough to characterize the risk of drought on a nationwide basis (FEMA, 1997) and neither of the Palmer indices are well suited to the dry, mountainous western United States.

[31] NIDIS U.S. Drought Portal website is located at: http://www.drought.gov/portal/server.pt/community/drought.gov/202



Source: http://droughtmonitor.unl.edu/DM_state.htm?NM,W

Figure 3-3: U.S. Drought Monitor Map



Source: http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

Figure 3-4: U.S. Seasonal Drought Outlook Map

Water sources for Doña Ana County include the surface waters of the Lower Rio Grande and groundwater stored in several regional basin aquifers. The Lower Rio Grande surface water is completely dedicated for agricultural use and is primarily delivered through storage and diversion facilities owned and operated by the USBR and the delivery and waste capture facilities of the EBID. The groundwater and surface water supplies within the Lower Rio Grande area are highly connected, wherein high use of groundwater can cause surface water to enter the groundwater system and reduce the amount of surface water available for irrigation. Since all of the surface water in the Rio Grande is legally allotted to users with surface water rights and since the full amount of the users' surface water allotment is usually not available, people have been arguing that the use of groundwater in the area is infringing upon the legal rights of users with surface water rights (PJS&C, 2009). In times of drought, this condition is only exasperated as thirsty users indirectly compete for water via the surface/groundwater connection. This condition extends into the general economy in for form of increased food prices, potential job loss, and increased litigation.

In summary, current drought conditions for the majority of the County are estimated to be abnormally dry with some expected improvements possible over the next 3 months. Sunland Park and the extreme southern strip of the County are currently reporting no drought. All of the County and jurisdictions are anticipated to see some improvement of conditions over the next three months.

Vulnerability – CPRI Results

Drought CPRI results for each community are summarized in Table 3-8 below.

Table 3-8: CPRI results by jurisdiction for drought

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration	CPRI Score
Anthony	Likely	Negligible	> 24 hours	> 1 week	2.20
EBID	Highly Likely	Limited	> 24 hours	> 1 week	2.95
Hatch	Highly Likely	Limited	> 24 hours	> 1 week	2.95
Las Cruces	Likely	Limited	> 24 hours	> 1 week	2.50
Mesilla	Highly Likely	Limited	> 24 hours	> 1 week	2.95
NMSU	Highly Likely	Negligible	> 24 hours	> 1 week	2.65
Sunland Park	Likely	Limited	> 24 hours	> 1 week	2.50
Unincorporated Doña Ana County	Likely	Negligible	> 24 hours	< 1 week	2.20
				County-wide average CPRI =	2.61

Vulnerability – Loss Estimations

No standardized methodology exists for estimating losses due to drought and drought does not generally have a direct impact on critical facilities and building stock. A direct correlation to loss of human life due to drought is improbable for Doña Ana County. Instead, drought vulnerability is primarily measured by its potential impact to certain sectors of the County economy and natural resources including:

- Crop and livestock agriculture
- Municipal and industrial water supply
- Recreation/tourism
- Wildlife and wildlife habitat

Sustained drought conditions will also have secondary impacts to other hazards such as fissures, flooding, subsidence and wildfire. Extended drought may weaken and dry the grasses, shrubs, and trees of wildfire areas, making them more susceptible to ignition. Drought also tends to reduce the vegetative cover in watersheds, and hence decrease the interception of rainfall and increase the flooding hazard. Subsidence and fissure conditions are aggravated when lean surface water supplies force the pumping of more groundwater to supply the demand without the benefit of recharge from normal rainfall.

Other direct costs such as increased pumping costs due to lowering of groundwater levels and costs to expand water infrastructure to compensate for reduced yields or to develop alternative water sources, are a significant factor but very difficult to estimate due to a lack of documentation. There are also the intangible costs associated with lost tourism revenues, and impacts to wildlife habitat and animals. Typically, these impacts are translated into the general economy in the form of higher food and agricultural goods prices and increased utility costs.

Vulnerability – Development Trends

Population growth in Doña Ana County will also require additional water to meet the thirsty demands of potable, landscape, and industrial uses. Water rights and adjudication within the Lower Rio Grande area, both for surface and groundwater, are such that there are no unclaimed sources of water to augment current supplies. That means that in order to provide additional water for domestic use to meet the demands of a growing population, existing water rights will have to re-allocated or water sources outside of the Rio Grande must be sought. Sustained drought conditions will only make this exercise more difficult and should be carefully considered with any planned growth.

Vulnerability – Jurisdictional Summary

There are minor geographic variations in the severity of drought conditions across the County and the overall drought intensity ranges between moderate to high. However, the overall vulnerability to drought is essentially the same county-wide and is considered moderate due to the sustaining delivery of water via the Bureau of Reclamation's Elephant Butte and Caballo Dams in connection with EBID's operations and distribution systems. During times of drought, additional pumping is required to draw groundwater stored in the Rio Grande Valley aquifers. These are rapidly recharged during times of surface water abundance. The economic impacts of drought may directly impact certain sectors such as agriculture and potable water production due to increased pumping costs and the ripple effect of those impacts will ultimately touch every sector of the County. Secondary effects include increased wildfire hazard. Accordingly, the mitigation of Drought is equally a priority for all participating jurisdictions.

Sources

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Environmental Working Group's Farm Subsidy Database, 2012, http://farm.ewg.org/progdetail.php?fips=35013&progcode=total_dis&regionname=DonaAnaCounty,NewMexico

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Peter J. Smith & Company, Inc., 2009, *Comprehensive Plan Inventory for the City of Las Cruces and Doña Ana County.*

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Profile Maps

See Figures 3-3 and 3-4 for depictions of the current and anticipated drought conditions for the county.

3.3.3 Extreme Cold

Description

Extreme temperatures on either the cold or hot side of the thermometer can occur within any area and can often have adverse impacts on the health and welfare of a community or region. These extreme temperatures can impact people, pets, plants and infrastructure such as power lines and above and below-ground utility lines throughout the area.

What constitutes extreme cold is relative to what is considered normal cold temperatures for a region. In Doña Ana County, sustained, below freezing temperatures can prove to be dangerous and damaging, and especially when the thermometer starts dipping into the sub-zero range. For example, economic losses due to frozen crops, downed power lines, or burst pipelines can be significant. Sustained conditions of freezing temperatures can also pose a dangerous health risk to people and their animals, and especially when overtaxed utility service providers go offline. Exposure to cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible.

History

Extreme cold events occur infrequently in the County and normally around the December-February time of year. According to WRCC data, the December-February low temperatures Range between 28 and -10 degrees Fahrenheit for the 41 year period of 1960 to 2011. During that period, temperatures dipped below zero degrees only 3 times; January 1962, November 1976, and February 2011. Articles in the Las Cruces Las Cruces Sun-News indicated that the extreme cold temperatures for the 1962 and 1976 events caused school and business closures, icing of roadways, frozen water pipes, and gas and electricity delivery failures due to the overwhelming demand.

On February 2 through 4, 2011, the entire southwest area of the U.S. experienced record breaking cold temperatures that were also accompanied by snow in many areas as a strong upper low dropped down the Northern Rockies and pushed a back door arctic cold front through the region. Temperatures in Doña Ana County ranged from the mid teens to as low -15 degrees Fahrenheit during that three day cold snap. Numerous frozen and broken pipes were reported, natural gas pressure was at all-time lows and schools were closed for 4 days due to all the problems caused by the cold. Numerous areas also experienced rolling power outages due to the high power demand.

The prolonged severe cold had a substantial economic impact on NMSU Las Cruces and also at other NMSU campuses across the state. The campuses closed on February 2, 2011 because of the snow packed roads and dangerous driving conditions. The closure of the Las Cruces campuses was prolonged an additional two days because natural gas pressure problems across Texas and New Mexico plagued El Paso Electric's efforts to import electricity. Approximately 60% of the NMSU campus receives power from El Paso Electric. As a result, there was little power available in the system and rolling blackouts and reduced usage were required to maintain essential services. The electrical power outages created network problems in addition to the heating system issues at NMSU. Only essential personnel and critical functions continued to operate. With a focus on the NMSU Las Cruces campuses to determine the economic loss, it is estimated that about $190,000 in property damage was incurred as a result of frozen water lines and natural gas outages. In

addition, there was about $2.7 million in salary cost to pay employees who did not work during the closure period.

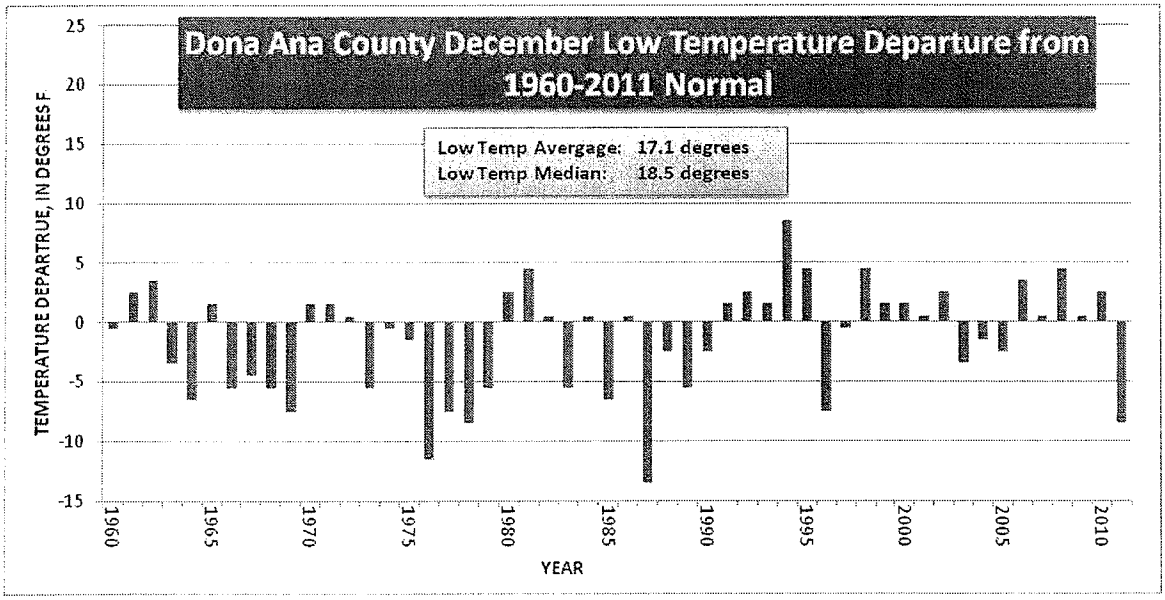
Officials from the Doña Ana County Office of Emergency Management (DACOEM), provided the following preliminary damage estimates reported to their office:

- City Sunland Park - $100,726.55
- Doña Ana County - $12,333.39
- Garfield Mutual Water - $10,000.00
- Town of Mesilla - $8,271.36
- Las Cruces Public Schools - $150,000 to $250,000
- Preliminary estimated total - $281,333.30 to $381,331.30

The State of New Mexico declared a State of Emergency and requested a major disaster declaration on February 22, 2011. On March 24, 2011, President Obama issued a disaster declaration for several counties in the state, however, Doña Ana County did not meet the threshold to be included in the declaration.

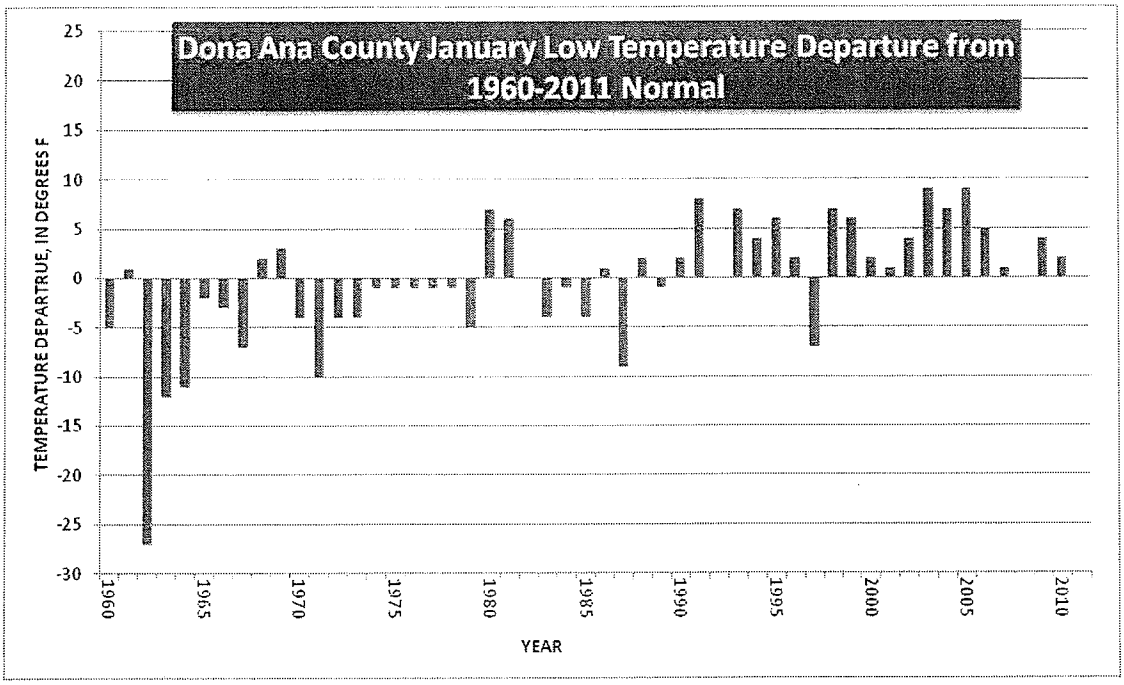
Probability

There are no readily available probability statistics for Extreme Low temperatures for Doña Ana County. However, historic temperature data is available for an assessment of the potential for future extreme cold events. Figures 3-5, 3-6, and 3-7 present extreme low temperature evaluations for the months of December, January, and February. The data sets were developed using WRCC data from the State University, New Mexico (COOP No. 298535) weather station for the period of 1960 to 2011.



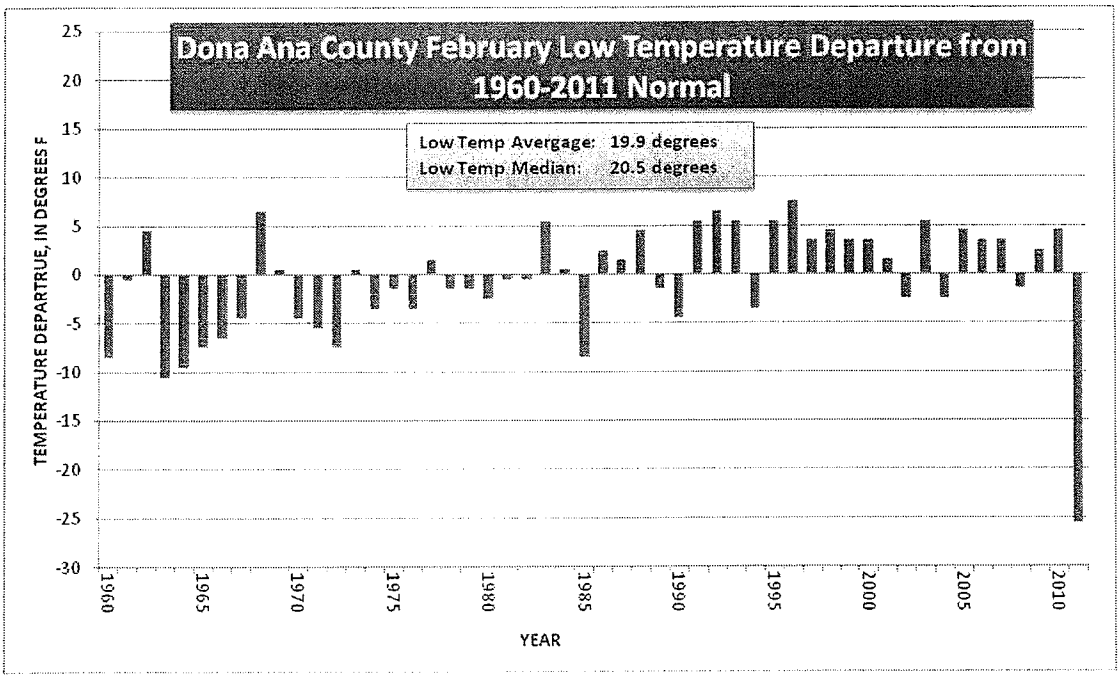
Data Source: WRCC, 2012

Figure 3-5: Low Temperature variances from a December normal based on 1960 to 2011 period



Data Source: WRCC, 2012

Figure 3-6: Low Temperature variances from a January normal based on 1960 to 2011 period



Data Source: WRCC, 2012

Figure 3-7: Low Temperature variances from a February normal based on 1960 to 2011 period

A review of Figures 3-6 and 3-7 show that the 1962 and 2011 events represent a significant departure from the median temperature for the period of record, and are fairly rare events. It can be concluded that future events are probable, but likely to be low in frequency.

Extent/Magnitude

Part of the significance of the February 2011 event was the extended duration (3 days), which exacted a major toll on utility service providers and local resources. Based on the historic record, it is probable that extreme cold temperatures of 0° to -15° have and can occur during the months of December, January and February for all of the County. Durations of 1 to 3 or more days are also probable.

Wind that accompanies low temperatures also serves to exasperate the extent. The following chart, provided by the NWS, provides a way to adjust cold temperatures for the effects of wind chill:

NWS Windchill Chart

Temperature (°F)

Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

In summary, there is no discernible division or variance of exposure to extreme cold temperatures throughout the county. All jurisdictions are considered to be equally exposed to the low probability potential for extreme cold events.

Vulnerability – CPRI Results

Extreme Cold CPRI results for each community are summarized in Table 3-9 below.

Table 3-9: CPRI results by jurisdiction for extreme cold

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration	CPRI Score
Anthony	Possible	Limited	> 24 hours	< 24 hours	1.85
EBID	Possible	Negligible	> 24 hours	< 1 week	1.65
Hatch	Possible	Limited	6-12 hours	< 1 week	2.25
Las Cruces	Possible	Limited	> 24 hours	< 24 hours	1.85
Mesilla	Likely	Limited	> 24 hours	< 1 week	2.40
NMSU	Possible	Limited	12-24 hours	< 1 week	2.10
Sunland Park	Unlikely	Limited	> 24 hours	< 24 hours	1.40
Unincorporated Doña Ana County	Possible	Limited	> 24 hours	< 1 week	1.95
				County-wide average CPRI =	1.93

Vulnerability – Loss Estimations

Losses due to extreme cold primarily occur in the form of infrastructure and crop damages, and lost revenues due to operational shut downs. Human and animal death and injury may also result in extreme cases with extended durations, although none have been documented to date.

No direct estimates of losses will be made for this Plan, however, past events would indicate that multiple days of extreme cold within the county can quickly add up to multiple hundreds of the thousands of dollars.

Vulnerability – Development Trends

Growth within Doña Ana County and the participating jurisdictions will only increase the exposure to the extreme cold events. Practical use and enforcement of modern building codes and will go a long ways towards providing effective mitigation for extreme cold events. Organizations with greater exposure and resources, may look at installing surplus natural gas storage tanks and backup power generation equipment.

Vulnerability – Jurisdictional Summary

As demonstrated in the previous discussions, there is little significant deviation in expected low temperature extremes for the populated areas of the County. Accordingly, all of the participating jurisdictions are considered to be equally exposed to the hazard of Extreme Cold. Given the infrequent recurrence of the extreme cold events and the relatively minor losses associated with the two events that have occurred in the last 42 years, the overall vulnerability is considered to be low. New Mexico State University sustained substantial damages and closures in the February 2011 event, and has chosen to make Extreme Cold a priority in their mitigation strategy. Doña Ana County, Las Cruces and Mesilla also have mitigation actions that include Extreme Cold with a list of other hazards, as part of a comprehensive multi-hazard strategy that involves building codes and building modernization (See Section 4.3.2). Anthony, Hatch, and Sunland Park do not consider Extreme Cold to be a mitigation priority and EBID vulnerability is at a nuisance level only.

Sources

FEMA, 1997, *Multi-Hazard Identification & Risk Assessment – A Cornerstone of the Nat'l Mitigation Strategy*.

National Weather Service, URL: http://www.nws.noaa.gov/om/windchill/

Western Regional Climate Center, URL: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?nm8535

Profile Maps

No profile maps are provided. All populated areas of the County are equally exposed to extreme cold temperatures and there is no significant geographical variability between the participating jurisdictional areas.

3.3.4 Flooding

Description

For the purpose of this Plan, the hazard of flooding addressed in this section will pertain to floods that result from precipitation/runoff related events. Other flooding due to dam or levee failures are addressed separately. The two seasonal atmospheric events that tend to trigger floods in Doña Ana County are:

- *Tropical Storm Remnants*: Some of the worst flooding tends to occur when the remnants of a hurricane that has been downgraded to a tropical storm or tropical depression enter the State. These events occur infrequently and mostly in the early autumn, and usually bring heavy and intense precipitation over large regions causing severe flooding.
- *Summer Monsoons*: In mid to late summer the monsoon winds bring humid subtropical air into the State. Solar heating triggers afternoon and evening thunderstorms that can produce extremely intense, short duration bursts of rainfall. The thunderstorm rains are mostly translated into runoff and in some instances, the accumulation of runoff occurs very quickly resulting in a rapidly moving flood wave referred to as a flash flood. Flash floods tend to be very localized and cause significant flooding of local watercourses.

Most of the storms that produce large amounts of runoff occur in the months of June through September. Fall, winter and spring are the dry seasons because much of the moisture in eastward circulation from the Pacific Ocean is removed as the air is passed over the mountains west of New Mexico. In the summer, moisture-laden air from the Gulf of Mexico enters southern New Mexico. Strong surface heating and upslope flow of the air cause brief and often heavy showers.

Damaging floods in the county include riverine, sheet, alluvial fan, and local area flooding. Riverine flooding occurs along established watercourses when the bankfull capacity of a watercourse is exceeded by storm runoff or snowmelt and the overbank areas become inundated. Sheet flooding occurs in regionally low areas with little topographic relief that generate floodplains over a mile wide. Alluvial fan flooding is generally located on piedmont areas near the base of the local mountains and are characterized by multiple, highly unstable flowpaths that can rapidly change during flooding events. Local area flooding is often the result of poorly designed or planned development wherein natural flowpaths are altered, blocked or obliterated, and localized ponding and conveyance problems result. Erosion is also often associated with damages due to flooding.

In the Chaparral area, the flooding is generally very shallow due to the lack of well-defined flood paths. Flooding on streams on the West Mesa (west of the City of Las Cruces) is characterized by high-velocity flows heavily charged with sediment and debris; it generally results from brief, intense thunderstorms. Flood hazards are further aggravated as these high-velocity sediment flows enter the Rio Grande Valley. Upon reaching the escarpment these flows spread out to form alluvial fans or cones of sediment at the base of the escarpment deposited by floods. The areas with alluvial fans are characterized by high-velocity flows, large amounts of sediment deposition, and unpredictable flow paths that may change during the same flood event.

Another major flood hazard comes as a secondary impact of wildfires in the form of dramatically increased runoff from ordinary rainfall events that occur on newly burned watersheds. Denuding of the vegetative canopy and forest floor vegetation, and development of hydrophobic soils are the primary factors that contribute to the increased runoff. Canopy and floor level brushes and grasses intercept and store significant volumes of rainfall during a storm event. They also add to the overall watershed roughness which generally attenuates the ultimate peak discharges. Soils in a wildfire burn area can be rendered hydrophobic, which according the Natural Resource Conservation Service (NRCS) is the development of a thin layer of nearly impervious soil at or below the mineral soil surface that is the result of a waxy substance derived from plant material burned during a hot fire. The waxy substance penetrates into the soil as a gas and solidifies after it cools, forming a waxy coating around soil particles. Hydrophobic soils, in combination with a denuded watershed, will significantly increase the runoff potential, turning a routine annual rainfall event into a raging flood with drastically increased potential for soil erosion and mud and debris flows.

History

Flooding is clearly a major hazard in Doña Ana County as shown in Table 3-2. Doña Ana County has been a declared county in three flood related presidential disaster declarations as follows:

Disaster	Declaration Date	Incident Type	Incident Period
FEMA-DR-353	September 20, 1972	Heavy Rains, Flooding	September 20, 1972
FEMA-DR-1301	September 22, 1999	Severe Storms and Flooding	July 16, 1999 to August 7, 1999
FEMA-DR-1659	August 30, 2006	Severe Storms and Flooding	July 26, 2006 to September 18, 2006

Descriptions of significant flood events that have occurred over the past 10 years are summarized below:

- In June 2004, thunderstorms repeatedly moved over southern and central Doña Ana County, dropping more than three inches of rain between Las Cruces and northeast El Paso. Though most areas experienced nuisance flooding, the town of Vado, which lies in a somewhat sunken basin, received run-off from most of the surrounding area, resulting in the evacuation of 14 houses. Most of the town was under two to three feet of water, with a few spots under six feet. Damages in the town were reported to exceed $500,000. Governor Richardson later declared Vado a disaster area. (NCDC, 2012)
- In September 2005, major flooding occurred across most of the Las Cruces area as a thunderstorm complex dropped heavy rain during a three hour time frame. Rainfall reports were widespread two to three inches with isolated amounts around four inches. All major roads were flooded with a few intersections under four feet of water. Sandbags were put up until resources were exhausted. The rainfall amounts

were not extremely unusual, just the areal coverage. Damages were estimated to exceed $1 million. (NCDC, 2012)

- In August-September 2006, a series of summer storms caused significant flooding throughout Doña Ana County and much of the rest of New Mexico, resulting in federal disaster declaration (FEMA-DR-1659) for most of the state.
    - It began August 1st, with a cluster of slow moving thunderstorms that dropped 1.5 to 3 inches of rain over the southern portion of Doña Ana County, especially near the Rio Grande. Even higher amounts fell over the nearby Franklin Mountains which added to severe runoff problems. Interstate 10 south of Las Cruces was closed for several hours. Hardest hit with damage to roads and structures was Sunland Park, followed by Anthony, Chaparral and La Union. About 1200 residents in Sunland Park were forced to evacuate as the Rio Grande reached a stage of 9.3 feet, the highest in 50 years. Property and crop damages were estimated at over $3 million. (NCDC, 2012)
    - On August 3rd, A line of rapidly moving thunderstorms dropped up to an inch and a half of rain in less than 30 minutes during the early morning hours. This was only 36 hours after the extensive flash flooding on August 1st, so runoff was excessive. Roads were impassable in Chaparral, and erosion exposed gas pipes in Vado and Sunland Park. Damages were estimated to exceed $20,000. (NCDC, 2012)
    - On August 4th, flash flooding occurred in an area which included Organ, Doña Ana and the east mesa of Las Cruces. Roads were covered by up to two feet of water with some closures. Water also flooded backyards and entered homes as retention walls collapsed from water swollen arroyos. Damages were estimated to exceed $50,000. (NCDC, 2012)
    - On August 15th, runoff from heavy rains over the nearby Sierra De Las Uvas Mountains caused the Placitas Arroyo to breach, which sent a wall of water into the town of Hatch. Up to four feet of water entered business and residences. Mandatory evacuations of several hundred residents took place, including 150 people from an apartment complex which eventually had to be condemned. All roads into and within Hatch were closed. Losses to property and crops were estimated to exceed $4.5 million. (NCDC, 2012)
    - On August 21st, another heavy rain in the Hatch area caused a breach in the Placitas Arroyo. Most of the water flowed north of the village, but about eight residences were evacuated as a precaution. Highway 187 was covered with water and most of the damage was to crops and were estimated to exceed $50,000. (NCDC, 2012).
    - On August 28th-29th, A large cluster of thunderstorms dropped three to five inches of rain on much of the triangle between Las Cruces, Hatch and Deming, which is an unusually large area for such rainfall amounts in the desert southwest. The Placitas Arroyo near Hatch breached for the third time in 3 weeks, flooding mainly farm land. A flood wave resulted in minor

flooding of the Rio Grande downstream into the El Paso area, which was the third time this month. On the north side of the Sierra De La Uvas Mountains, a huge amount of runoff flooded the desert and led to the closure of Interstate 10 between Deming and Las Cruces for several hours. Closing the interstate along this stretch is not uncommon during dust storms, but extremely rare for flooding. The flooding also did damage to structures in this sparsely populated area. Property and crop damages were estimated to exceed $170,000. (NCDC, 2012)

- In September 1st-4th, four days of moderate to heavy rainfall due to tropical moisture influx from Hurricane John (which was moving up the Baja Peninsula) led to widespread flooding across much of southern New Mexico. Many roads were flooded in the area with law enforcement agencies reporting numerous closures. In Sunland Park, excessive runoff overwhelmed a drain pipe and resulted in a mudslide wherein several homes were flooded and a storage shed and part of a driveway washed away at one residence. Damages were estimated to exceed $70,000. (NCDC, 2012).

- In July 2008, two storms dumped heavy rain over a period of three days. On July 8th, a skywarn spotter reported three inches of rain within an hour in Chaparral, and the surrounding neighborhood was flooded. A couple of days later, a large cluster of thunderstorms moved over an area already saturated from heavy rain. Arroyos overflowed and low water crossings were flooded. Highways that were closed included Highway 9 between Columbus and Hachita, Highway 26 between Deming and Hatch, and Highway 27 south of Hillsboro. Property and crop damages were estimated to exceed $90,000. (NCDC, 2012).
- In September 2009, homes were flooded near Peachtree Hill northeast of Las Cruces. The U.S. 70 frontage road in this area was covered by up to three feet of water, and all major streets on the east mesa of Las Cruces were under water. Damages were estimated to exceed $70,000. (NCDC, 2012).
- In July 2010, very heavy rain over Las Cruces flooded many buildings and streets across town. New Mexico State University recorded 3.36 inches of rain. At least six buildings on the campus had water damage with several roads closed. Several water rescues from stalled vehicles were performed on campus. Stormwide damages were estimated to exceed $50,000 and NMSU reported over $12,000 in campus losses alone. (NCDC, 2012; NMSU, 2012).

Several other flood related incidents are summarized in the historic hazard database provided in Appendix E and on the enclosed CD.

Probability

For the purposes of this Plan, the probability of flood hazards in Doña Ana County jurisdictions are primarily based on the 1% (100-year) and 0.2% (500-year) probability floodplains delineated on FEMA Flood Insurance Rate Maps (FIRMs), plus any provisional floodplain delineations used for in-house purposes by participating jurisdictions or Steering Committee delineated areas. FEMA has recently completed a map modification program to

update the FIRMs for the County into a digital FIRM (DFIRM) format. The new DFIRM maps are still preliminary and have not been fully approved. For the purposes of this Plan, the City of Las Cruces chose to use the preliminary DFIRM floodplains to depict the flood hazard within the City limits. The current effective floodplain limits will be used for the rest of the county. DFIRM GIS base files were provided by the City of Las Cruces and Q3 GIS files for the rest of the county were obtained from FEMA.

Extent/Magnitude

As previously mentioned, the 100-year and 500-year floodplains delineated on the FEMA DFIRMS are the basis for estimation of the extent of flood hazards for the county. For the purposes of this Plan, two designations of flood hazard are used. Any FEMA "A" zone (otherwise known as a Special Flood Hazard Area or SFHA) is designated as a HIGH hazard area. MEDIUM flood hazard areas are all "Shaded X" zones. All "A" zones (e.g. – A, A1-99, AE, AH, AO, etc.) represent areas with a 1% probability of being flooded at a depth of one-foot or greater in any given year. All "Shaded X" zones represent areas with a 0.2% probability of being flooded at a depth of one-foot or greater in any given year. These two storms are often referred to as the 100-year and 500-year storm, respectively.

Maps 2A through 2D show the flood hazard areas for the entire county. Maps 2E through 2O show the flood hazard areas for Anthony, EBID, Hatch, Las Cruces, Mesilla, NMSU, and Sunland Park.

Actual depths of flooding within each of these hazard areas vary and are dependent on the geometry, roughness, and slope of the particular conveyance, and the estimated peak discharges being conveyed. Flood-depth grids have not been developed for any of the FEMA mapped SFHAs in the county. In general, flood depths range from 1 to 10 feet depending on the watercourse and the relationship of the ground surface elevation to the predicted water surface elevation, with most overbank or sheet flood depths ranging from 1 to 2 feet. This variance applies county-wide. Duration of most flooding events for the County are usually limited to short duration, high intensity storms and last for only a few hours and predominately less than 1 day.

Vulnerability – CPRI Results

Flooding CPRI results for each community are summarized in Table 3-10 below.

Table 3-10: CPRI results by jurisdiction for flood

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration	CPRI Score
Anthony	Highly Likely	Critical	< 6 hours	< 24 hours	3.35
EBID	Highly Likely	Catastrophic	< 6 hours	< 24 hours	3.80
Hatch	Likely	Critical	< 6 hours	< 1 week	3.15
Las Cruces	Highly Likely	Critical	< 6 hours	< 1 week	3.60
Mesilla	Likely	Critical	12-24 hours	< 24 hours	2.75
NMSU	Likely	Critical	< 6 hours	< 1 week	3.15
Sunland Park	Likely	Limited	6-12 hours	< 24 hours	2.60
Unincorporated Doña Ana County	Highly Likely	Catastrophic	< 6 hours	< 24 hours	3.80
				County-wide average CPRI =	**3.28**

Vulnerability – Loss Estimations

The estimation of potential exposure to HIGH and MEDIUM flood hazards was accomplished by intersecting the human and facility assets with the flood hazard limits depicted on the profile maps. Loss estimates to all facilities located within the HIGH and MEDIUM flood hazard areas were made based on the loss estimation tables published by FEMA (FEMA, 2001). Most of the assets located within HIGH hazard flood areas will be subject to three feet or less of flooding. Using the FEMA tables, it is assumed that all structural assets located within the HIGH hazard areas will have a loss-to-exposure ratio of 0.20 (or 20%). A loss to exposure ratio of 0.05 (5%) is assumed for assets located in the MEDIUM hazard areas. Table 3-11 summarizes the critical facility, population, and residential housing unit exposure and loss estimates for the HIGH and MEDIUM flood hazards. Estimates are reported by jurisdiction and county-wide.

In summary, $80.0 million and $0.5 million in critical facility related losses are estimated for HIGH and MEDIUM flood hazards, for all the participating jurisdictions in Doña Ana County. An additional $306.2 million and $44.2 million in HIGH and MEDIUM flood losses to 2010 Census residential housing units is estimated for all participating Doña Ana County jurisdictions. For EBID facilities, Table 3-7 indicates a total exposure of 20.8 and 32.4 miles of canal/laterals and drains/wasteways to HIGH hazard flooding. Losses to these facilities are estimated at $4.2 million.

Regarding human vulnerability, a total population of 18,583 people, or 8.88% of the total population, is potentially exposed to a HIGH hazard flood event. A total population of 13,308 people, or 6.36% of the total population, is potentially exposed to a MEDIUM hazard flood event. Based on the historic record, multiple deaths and injuries are plausible and a substantial portion of the exposed population is subject to displacement depending on the event magnitude.

It is duly noted that the loss and exposure numbers presented above represent a comprehensive evaluation of the County as a whole. It is unlikely that a storm event would occur that would flood all of the delineated HIGH and MEDIUM flood hazard areas at the same time. Accordingly, actual event based losses and exposure are likely to be only a fraction of those summarized above. Furthermore, it should be noted that all MEDIUM flood exposure and loss numbers reported herein are incremental to the numbers reported for the HIGH hazard flood (e.g. – should a full 500 year event occur, the anticipated losses would be approximated by the HIGH plus MEDIUM values.) That is, the 100-year floodplain would be entirely inundated during a 500-year flood.

Table 3-11: Doña Ana County jurisdictional exposure and loss estimates due to flooding

FLOODING HAZARD EXPOSURE / LOSS	Anthony	Hatch	Las Cruces	Mesilla	NMSU	Sunland Park	Uninc. Doña Ana County	Total
Total Critical Facilities and Infrastructure	**10**	**11**	**121**	**13**	**40**	**8**	**50**	**253**
Estimated Replacement Cost (x $1,000)	**$37,505**	**$14,250**	**$765,525**	**$124,520**	**$811,777**	**$16,950**	**$1,405,806**	**$3,176,333**
Facilities Exposed to HIGH Hazard	1	10	15	1	7	0	8	42
Percentage of Total Facilities	10.00%	90.91%	12.40%	7.69%	17.50%	0.00%	16.00%	16.60%
Estimated Replacement Cost (x $1,000)	$4,000	$11,250	$49,110	$3,000	$112,284	$0	$220,500	$400,144
Estimated Structure Loss (x $1,000)	$800	$2,250	$9,822	$600	$22,457	$0	$44,100	$80,029
Facilities Exposed to MEDIUM Hazard	0	0	1	2	0	0	2	5
Percentage of Total Facilities	0.00%	0.00%	0.83%	15.38%	0.00%	0.00%	4.00%	1.98%
Estimated Replacement Cost (x $1,000)	$0	$0	$5,000	$3,100	$0	$0	$1,800	$9,900
Estimated Structure Loss (x $1,000)	$0	$0	$250	$155	$0	$0	$90	$495
Total Population	**9,403**	**1,679**	**97,571**	**1,944**	**4,542**	**14,274**	**79,815**	**209,229**
Population Exposed to HIGH Hazard	411	1,550	10,484	38	12	800	5,289	18,583
Percent Exposed	4.37%	92.30%	10.75%	1.95%	0.26%	5.60%	6.63%	8.88%
Population Exposed to MEDIUM Hazard	1	0	1,390	503	32	0	11,382	13,308
Percent Exposed	0.01%	0.00%	1.42%	25.86%	0.71%	0.00%	14.26%	6.36%
Population Over 65	**801**	**168**	**13,316**	**439**	**58**	**1,254**	**9,844**	**25,881**
Population Over 65 Exposed to HIGH Hazard	31	161	1,288	7	0	56	566	2,110
Percent Exposed	3.92%	96.07%	9.67%	1.69%	0.11%	4.44%	5.75%	8.15%
Population Over 65 Exposed to MEDIUM Hazard	0	0	168	117	4	0	1,419	1,708
Percent Exposed	0.05%	0.00%	1.26%	26.61%	7.12%	0.00%	14.41%	6.60%
Residential Building Count Totals)	**2,803**	**566**	**42,352**	**950**	**1,356**	**4,109**	**29,354**	**81,490**
Estimated Replacement Cost (x $1,000)	**$378,421**	**$76,437**	**$10,163,529**	**$228,050**	**$324,498**	**$554,713**	**$5,422,534**	**$17,148,181**
Residences Exposed to HIGH Hazard	116	521	4,554	16	1	233	1,907	7,348
Percentage of Total Facilities	4.14%	91.94%	10.75%	1.72%	0.06%	5.66%	6.50%	9.02%
Estimated Replacement Cost (x $1,000)	$15,656	$70,279	$1,092,990	$3,926	$165	$31,402	$316,605	$1,531,023
Estimated Structure Loss (x $1,000)	$3,131	$14,056	$218,598	$785	$33	$6,280	$63,321	$306,205
Residences Exposed to MEDIUM Hazard	0	0	677	250	10	0	4,153	5,090
Percentage of Total Facilities	0.00%	0.00%	1.60%	26.33%	0.71%	0.00%	14.15%	0.33%
Estimated Replacement Cost (x $1,000)	$34	$0	$162,382	$60,037	$2,298	$0	$658,587	$883,337
Estimated Structure Loss (x $1,000)	$2	$0	$8,119	$3,002	$115	$0	$32,929	$44,167

Vulnerability – Repetitive Loss Properties

Repetitive Loss (RL) properties are those NFIP-insured properties that since 1978, have experienced multiple flood losses. FEMA tracks RL property statistics, and in particular to identify Severe RL (SRL) properties. RL and SRL properties demonstrate a track record of repeated flooding for a certain location and are one element of the vulnerability analysis. RL properties are also important to the NFIP, since structures that flood frequently put a strain on the National Flood Insurance Fund. The latest FEMA records provided by DACFC indicate that dated January 31, 2011 indicate that there are two RL properties within Doña Ana County with a total of five loss incidents between them and a total of $131,000 paid in claims. Neither property is currently mitigated and both are located within a FEMA delineated SFHA (or HIGH flood hazard area). Options for accomplishing mitigation are being pursued by the DACFC in cooperation with the property owners.

Vulnerability – Development Trends

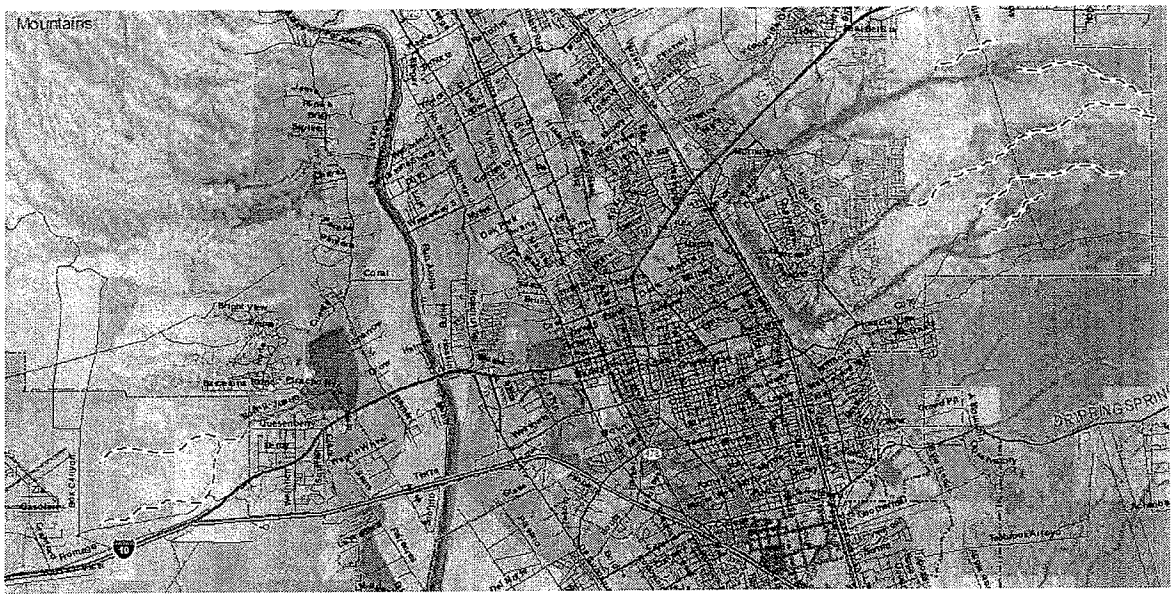
Most of the floodprone properties in Doña Ana County pre-date the planning jurisdictions' entry into the NFIP and were constructed prior to current floodplain management practices. The development of new properties or substantial re-development of existing structures is now subject to regulatory review procedures implemented by each jurisdiction throughout the entire county. For most of the jurisdictions, management of new growth generally involves enforcing current floodplain ordinance requirements and maintaining NFIP compliant practice and procedures. Challenges to the management of new growth include the need for converting approximate floodplain delineations into detailed delineations to better mitigate against flood risks, or to establish additional floodplain delineations to identify and map the flood hazards within the growth areas where no mapping currently exists. Jurisdiction specific growth area vulnerabilities are discussed below.

Anthony – The City's proposed growth areas do not lie within a delineated flood hazard area, however, the City is also actively pursuing the development of a master drainage plan that will better delineate flood related impacts and problem areas within the City limits, and recommend strategies for mitigating the flooding.

EBID – As with dam failure, many of EBID's facilities are located within or perpendicular to HIGH hazard flood areas. EBID is actively working to reduce the exposure of their facilities to these cross drainages and their impacts.

Hatch – As shown on Map 2I, a significant portion of the main Village is located within a HIGH hazard flood area, and this flooding will provide a challenge to any new development. The commercial and industrial expansion annexes locate west of the main village are much less vulnerable to flooding. The primary flood source for the Village is the Placitas Arroyo, which was a major contributor to all of the damage incurred during the 2006 storms. Hatch is working with the U.S. Army Corps of Engineers to develop a drainage master plan for the community. Recent federal budget cuts have put the planning on hold, but the Village continues to push this forward as a significant tool needed for flood mitigation.

Las Cruces – Las Cruces has a very active floodplain management strategy that is an integral part of the City's development services. For most of the projected growth areas, watercourse corridors have been identified with the land planning to preserve a functional area for conveying flood flows through the growth areas. Several of these corridors, shown using the dashed lines in the figure below, may require delineation of flood hazard areas, or extension of existing delineations, to better plan for the space needed for the preserve areas.



Mesilla – Given that little growth is anticipated for Mesilla over the next five years, growth in HIGH flood hazard areas will not be an issue.

NMSU – The main campus of NMSU is partially delineated by HIGH hazard flood areas. Development or expansion of the Arrowhead Park industrial area will need to address the outlflow channel from the Tortugas Site 1 dam as well as the inflow arroyo into the Tortugas Site 2 dam. There are also several large watercourses within the CDRRC and other areas that should be evaluated with any development of those areas that is near those watercourses.

Sunland Park – Only the small growth area located north of Country Club and west of State Road 260 is shown to intersect with a known HIGH hazard flood area. Any development of this area should address the floodplain issues and be in compliance with the NFIP regulations and local floodplain ordinance.

Unincorporated County – Growth in the unincorporated areas of Doña Ana County is expected to be focused in and around existing population centers, with the majority of growth expected within the ETZ and the southern portions of the County near Anthony and Sunland Park. There are several HIGH hazard flood areas delineated for these growth areas and several may require extensions to accommodate new growth.

Vulnerability – Jurisdictional Summary

All of the participating jurisdictions have varying levels of vulnerability to Flood hazards. All jurisdictions have designated Flood as a mitigation priority.

Sources

New Mexico Department of Homeland Security and Emergency Management, 2010, *New Mexico Natural Hazard Mitigation Plan,* approved October 2007, updated September 2010.

FEMA, 2001, Understanding Your Risks; Identifying Hazards and Estimating Losses, FEMA Document No. 386-2.

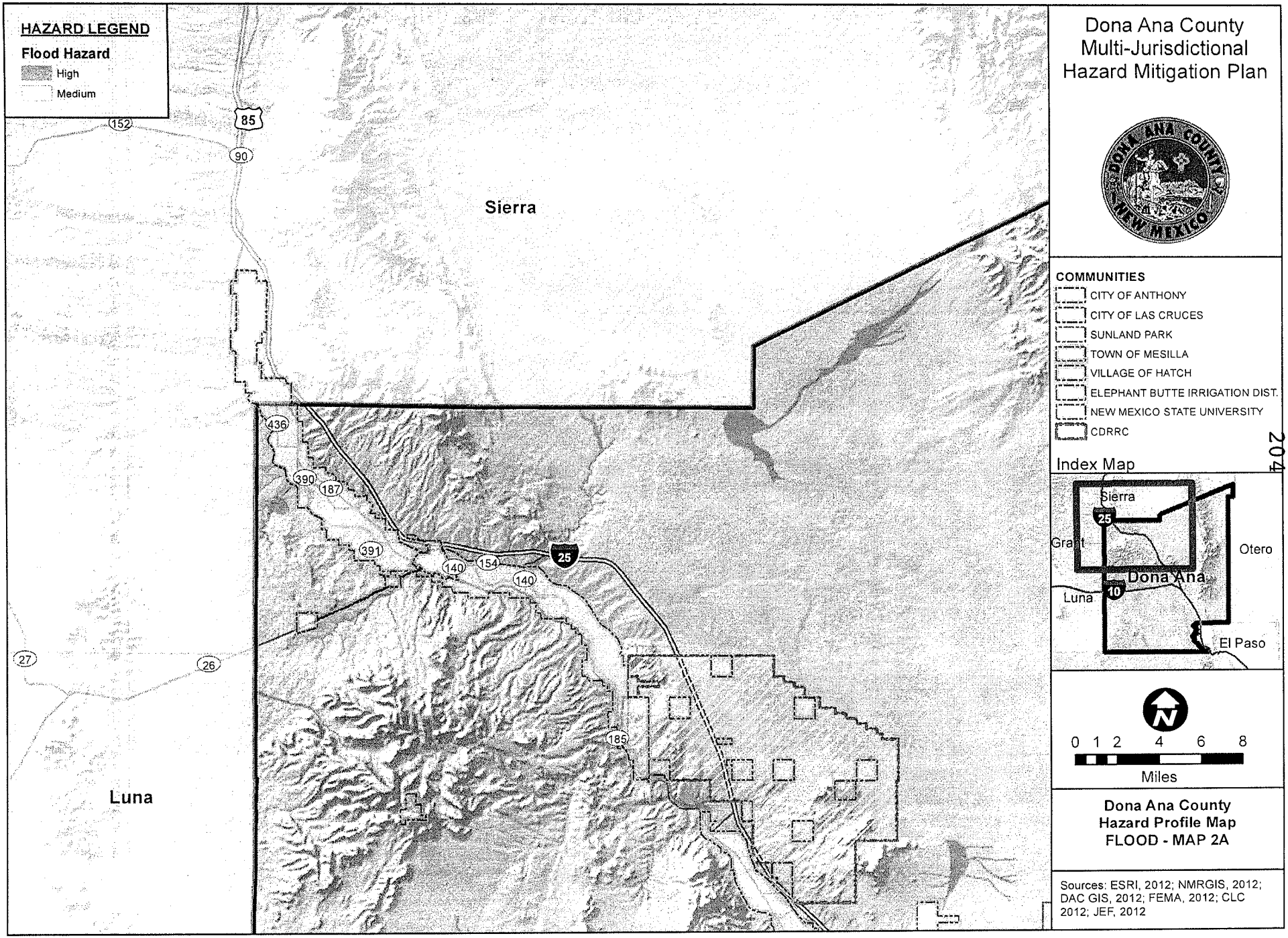
U.S. Dept of Commerce, National Climatic Data Center, 2012, Storm Events Database, accessed via the following URL: http://www.ncdc.noaa.gov/stormevents/

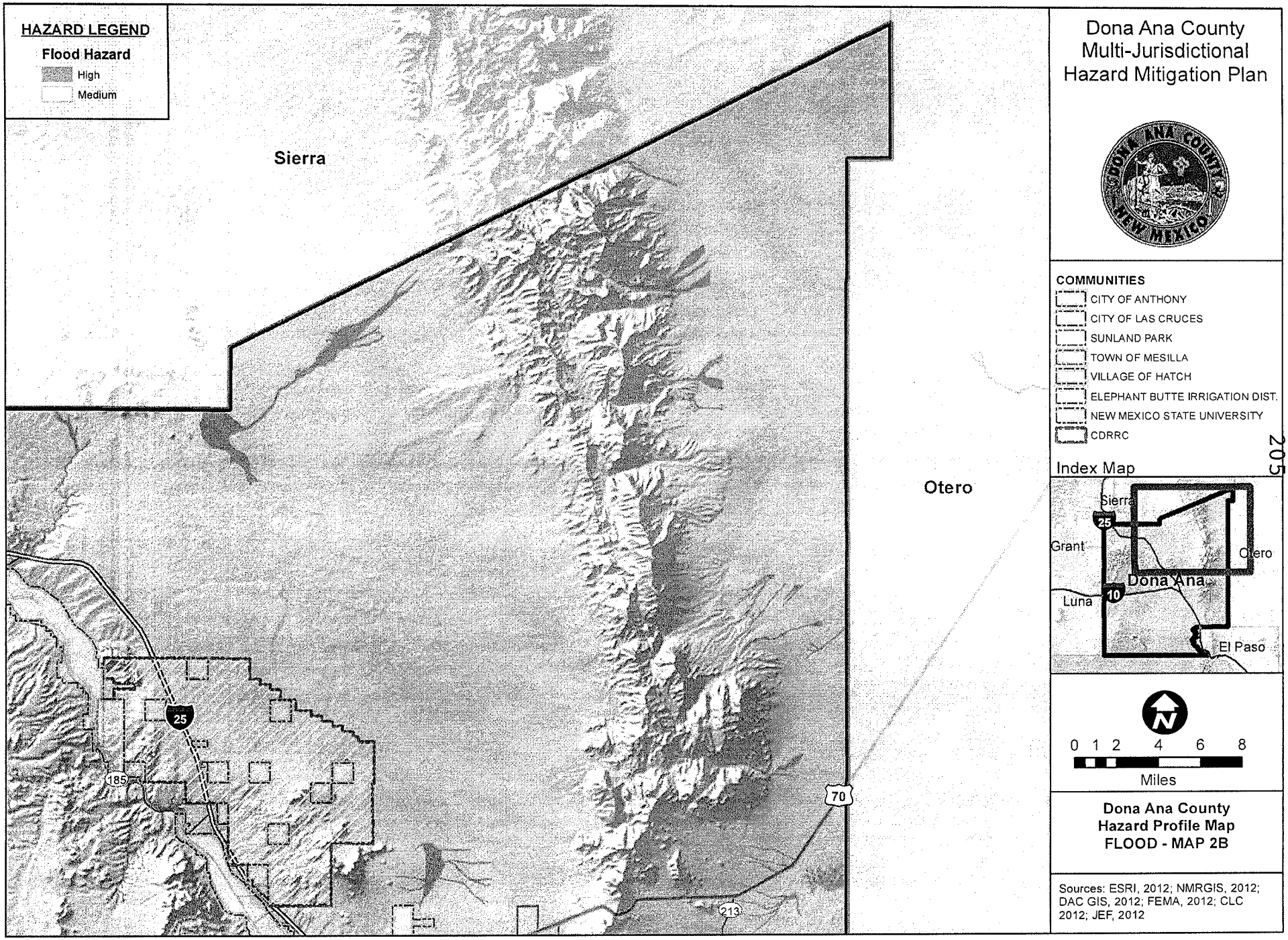
City of Las Cruces, Preliminary DFIRM data.

Profile Maps

Maps 2A through 2D – County-Wide Flood Hazard Maps

Maps 2E through 2O– Anthony, EBID, Hatch, Las Cruces, Mesilla, NMSU, and Sunland Park Flood Hazard Maps


HAZARD LEGEND
Flood Hazard
High
Medium
Sierra
Luna
152
85
90
436
390
187
391
140
154
25
27
26
185
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
10
N
0 1 2 4 6 8
Miles
Dona Ana County
Hazard Profile Map
FLOOD - MAP 2A
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

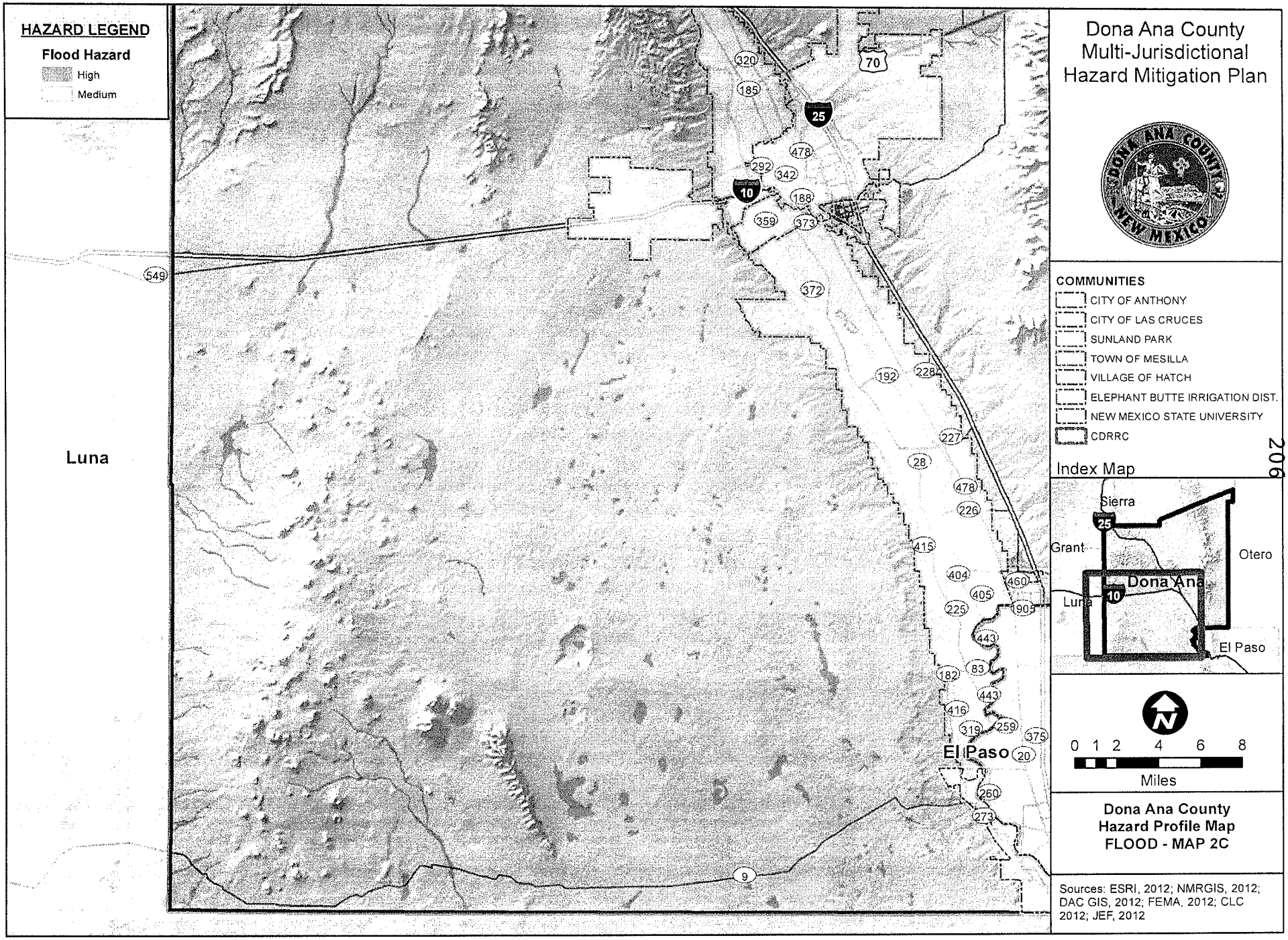
Index Map

0 1 2 4 6 8

Miles

Dona Ana County
Hazard Profile Map
FLOOD - MAP 2B

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC 2012; JEF, 2012


HAZARD LEGEND
Flood Hazard
High
Medium
Luna
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Index Map
Sierra
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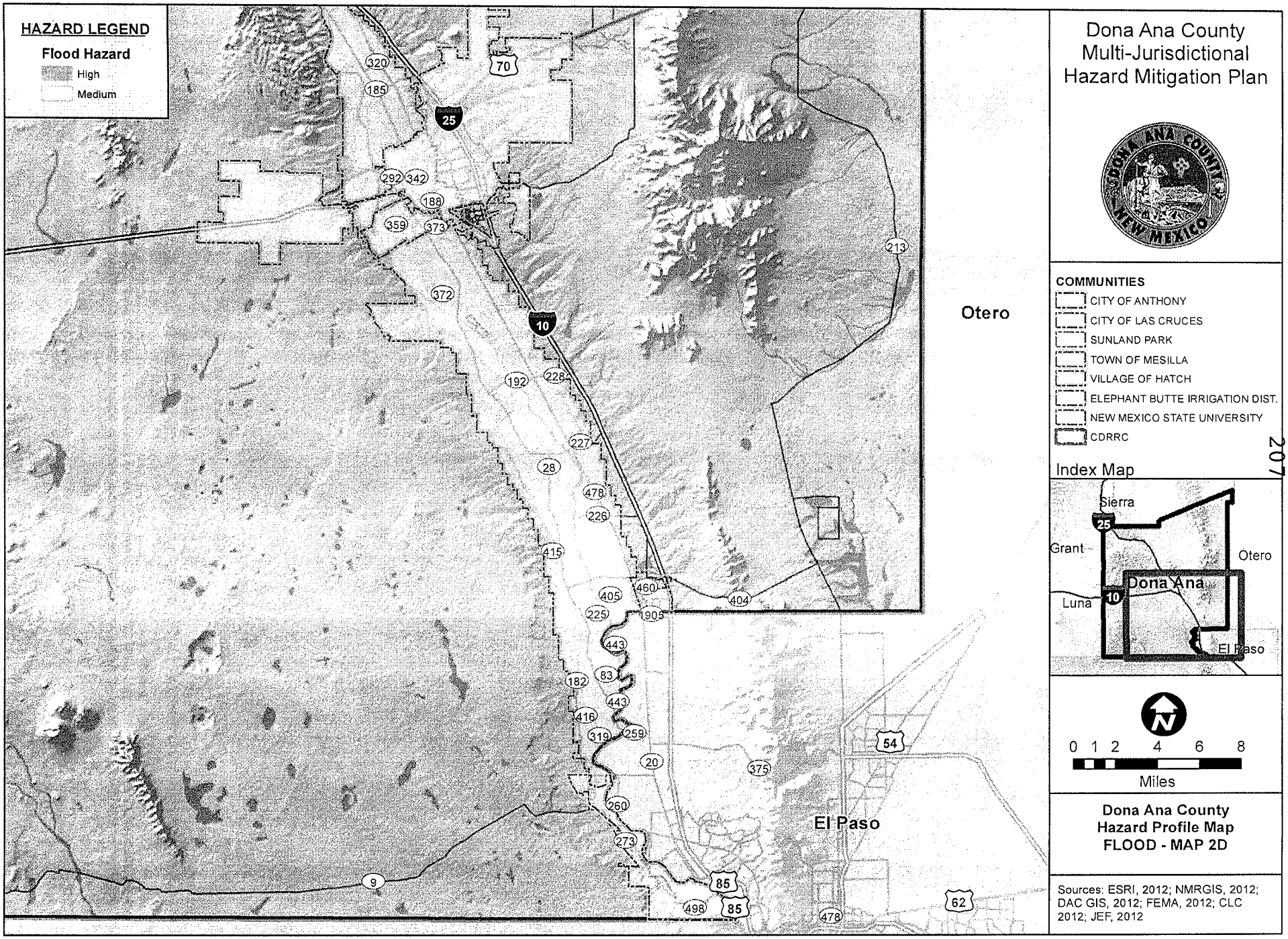
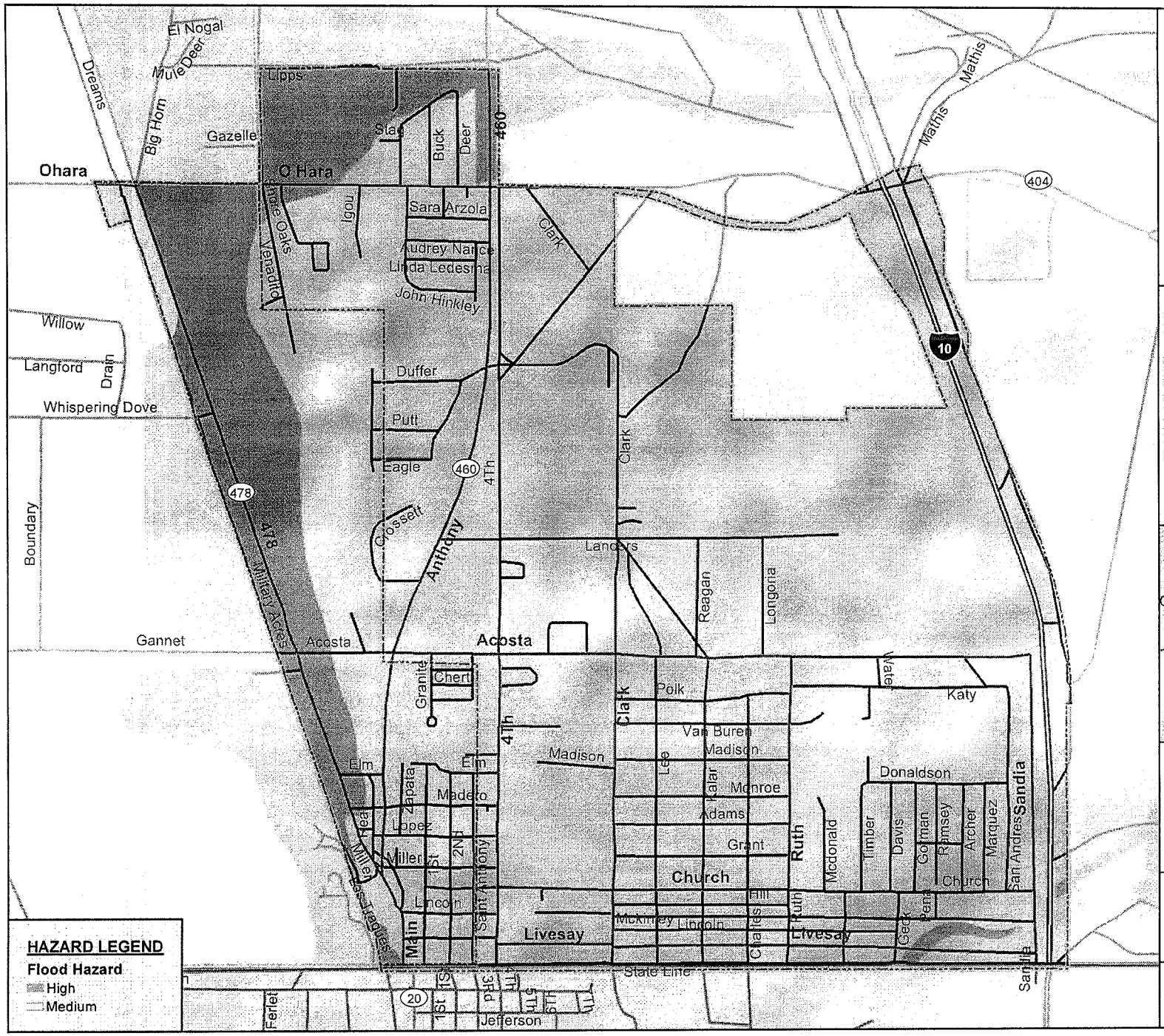
0 1 2 4 6 8
Miles
Dona Ana County
Hazard Profile Map
FLOOD - MAP 2C
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC 2012; JEF, 2012
El Paso
206


HAZARD LEGEND
Flood Hazard
High
Medium
Otero
El Paso
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 1 2 4 6 8
Miles
Dona Ana County
Hazard Profile Map
FLOOD - MAP 2D
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC 2012; JEF, 2012

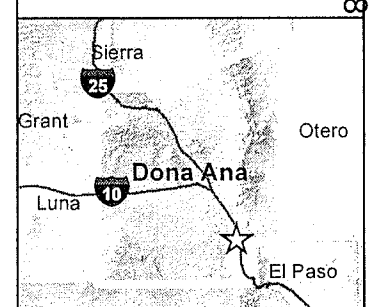


Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

City of Anthony New Mexico
July 1, 2010

COMMUNITIES

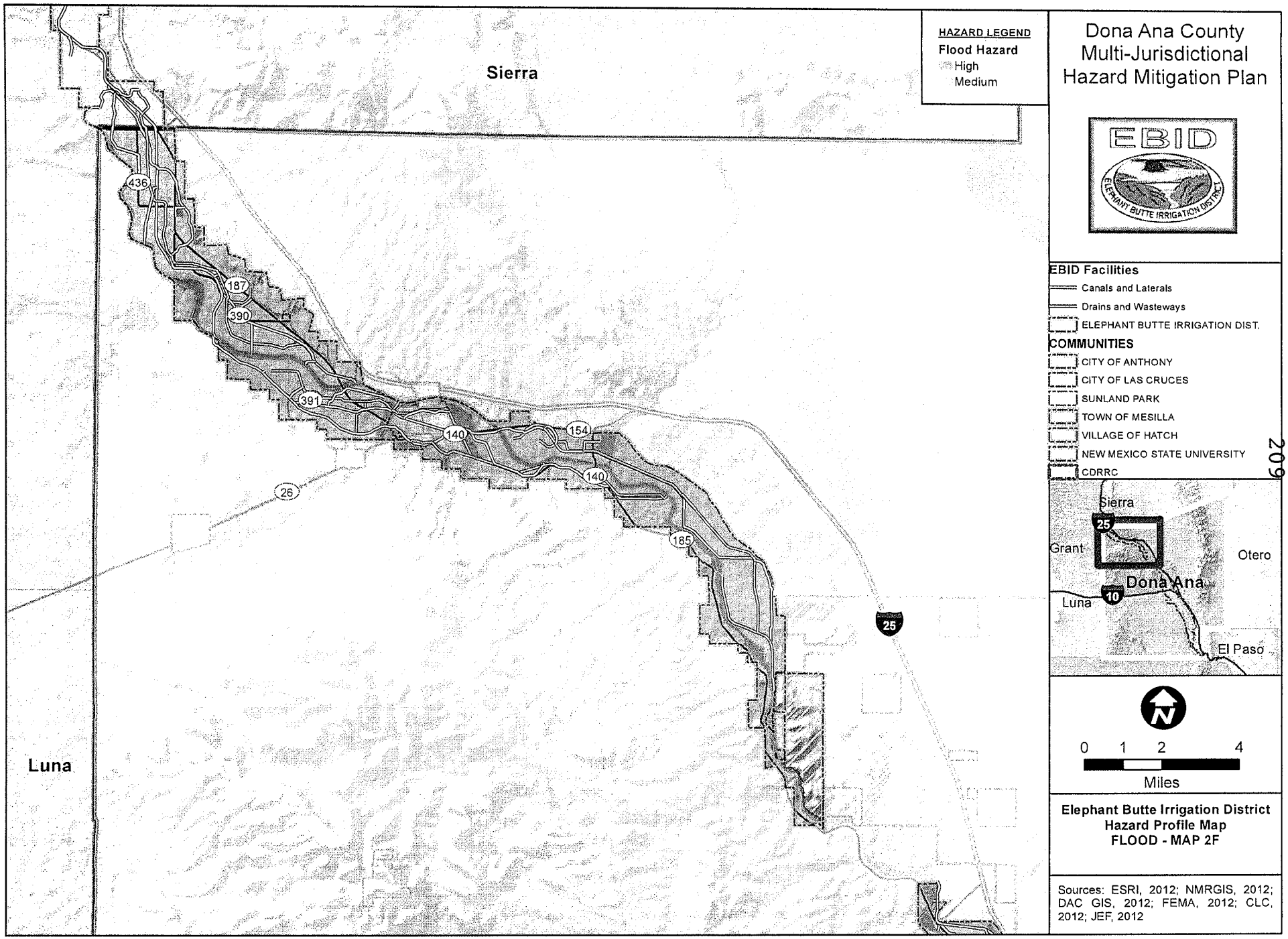
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC



0 500 1,000 2,000
Feet

City of Anthony
Hazard Profile Map
FLOOD - MAP 2E

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012


Sierra
Luna
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187
390
391
140
154
140
26
185
25
HAZARD LEGEND
Flood Hazard
High
Medium
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
EBID Facilities
Canals and Laterals
Drains and Wasteways
ELEPHANT BUTTE IRRIGATION DIST.
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
NEW MEXICO STATE UNIVERSITY
CDRRC
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Grant
Otero
Dona Ana
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Luna
El Paso
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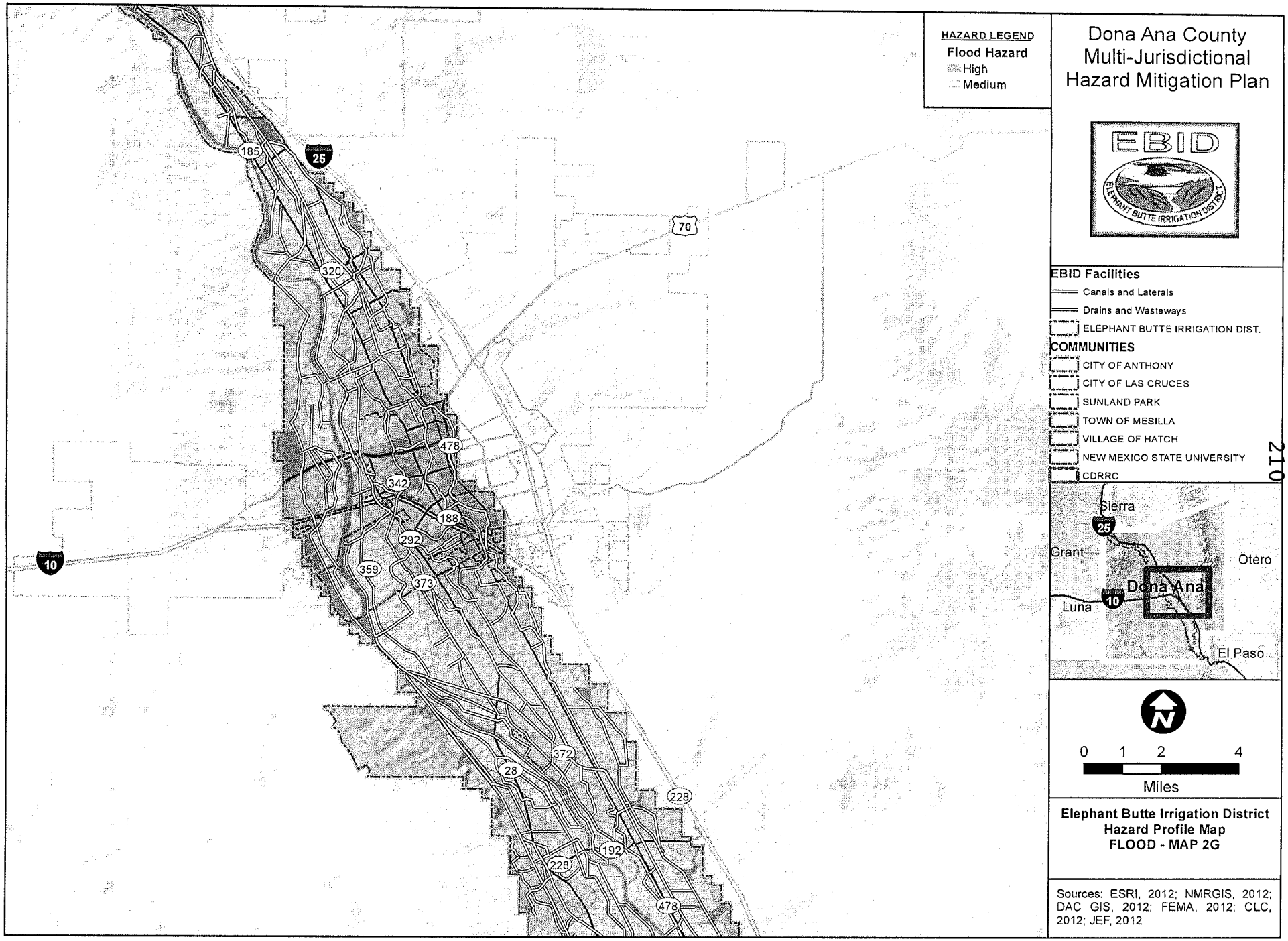
Miles
Elephant Butte Irrigation District
Hazard Profile Map
FLOOD - MAP 2F
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012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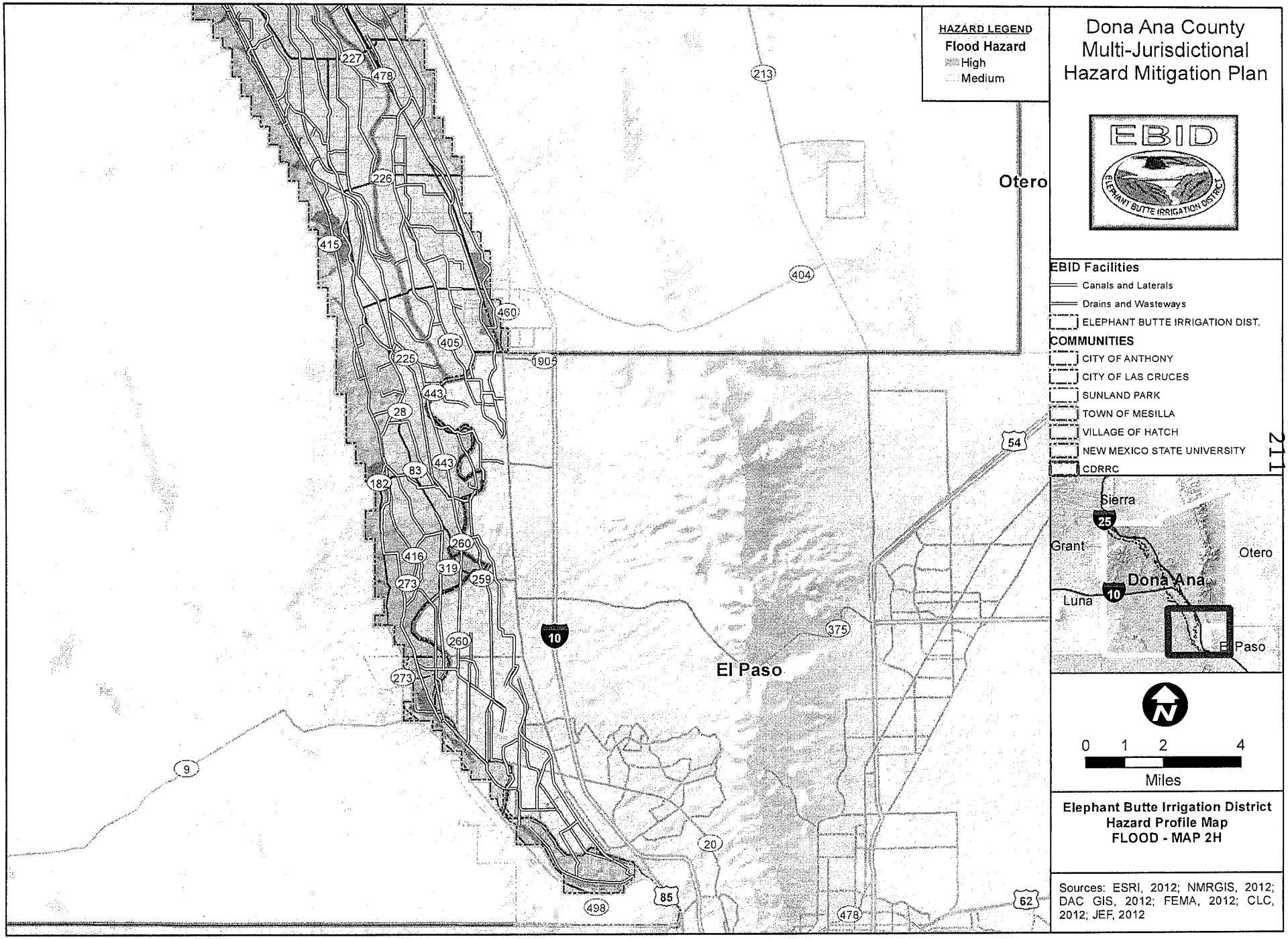
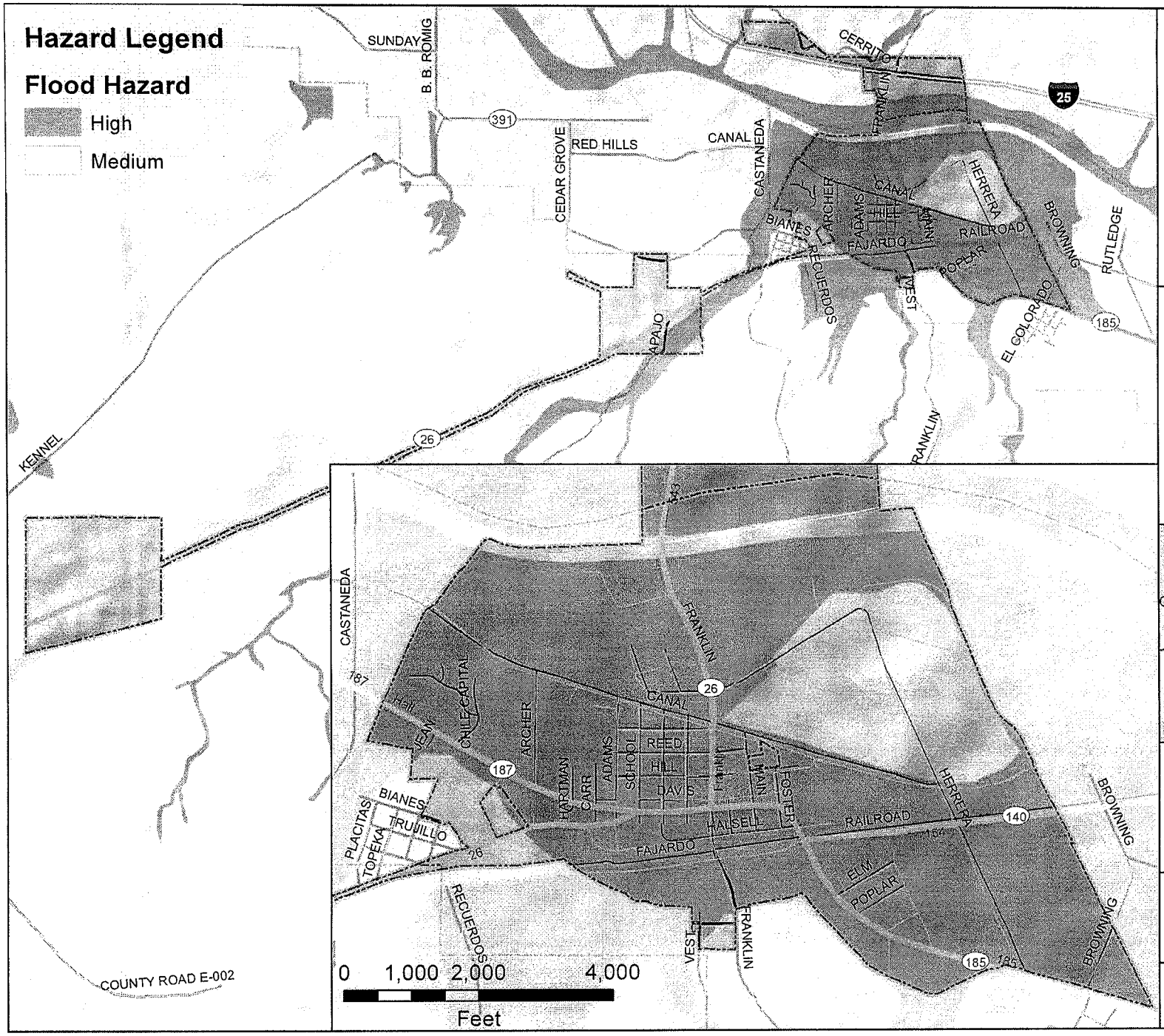
Flood Hazard
High
Medium
185
25
70
320
478
342
188
292
359
373
10
372
28
228
192
228
478
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
EBID Facilities
Canals and Laterals
Drains and Wasteways
ELEPHANT BUTTE IRRIGATION DIST.
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
NEW MEXICO STATE UNIVERSITY
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
N
0 1 2 4
Miles
Elephant Butte Irrigation District
Hazard Profile Map
FLOOD - MAP 2G
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012


HAZARD LEGEND
Flood Hazard
High
Medium
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
EBID Facilities
Canals and Laterals
Drains and Wasteways
ELEPHANT BUTTE IRRIGATION DIST.
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
NEW MEXICO STATE UNIVERSITY
CDRRC
Otero
El Paso
Sierra
Grant
Dona Ana
Luna
0 1 2 4
Miles
Elephant Butte Irrigation District
Hazard Profile Map
FLOOD - MAP 2H
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012

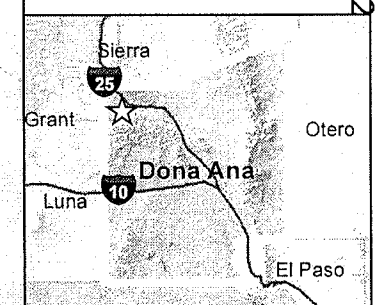


Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan

HATCH
NEW MEXICO
CHILE CAPITAL OF THE WORLD

COMMUNITIES

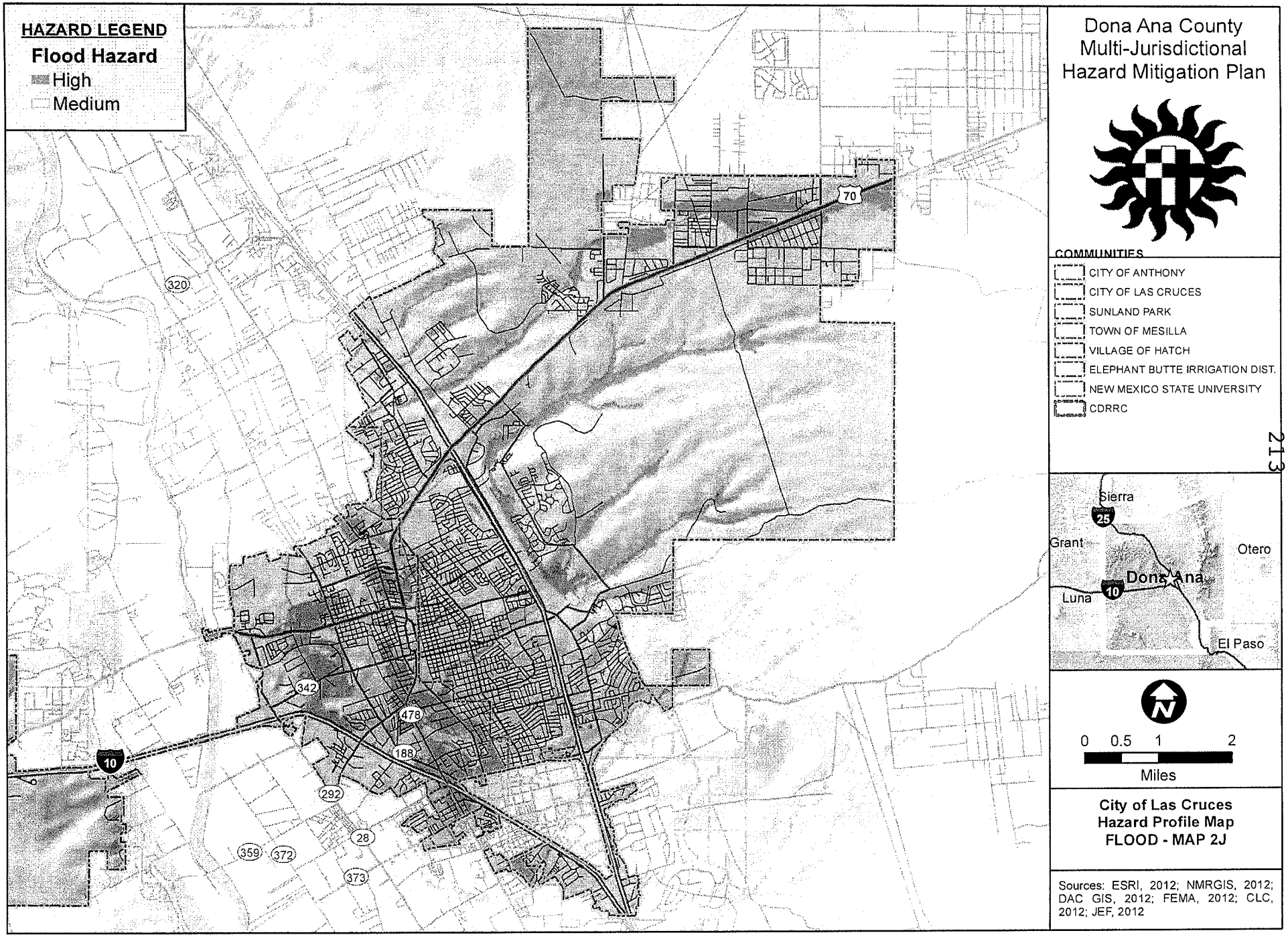
- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST
- NEW MEXICO STATE UNIVERSITY
- CDRRC



0 2,000 4,000 8,000
Feet

Village of Hatch
Hazard Profile Map
FLOOD - MAP 2I

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC; 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

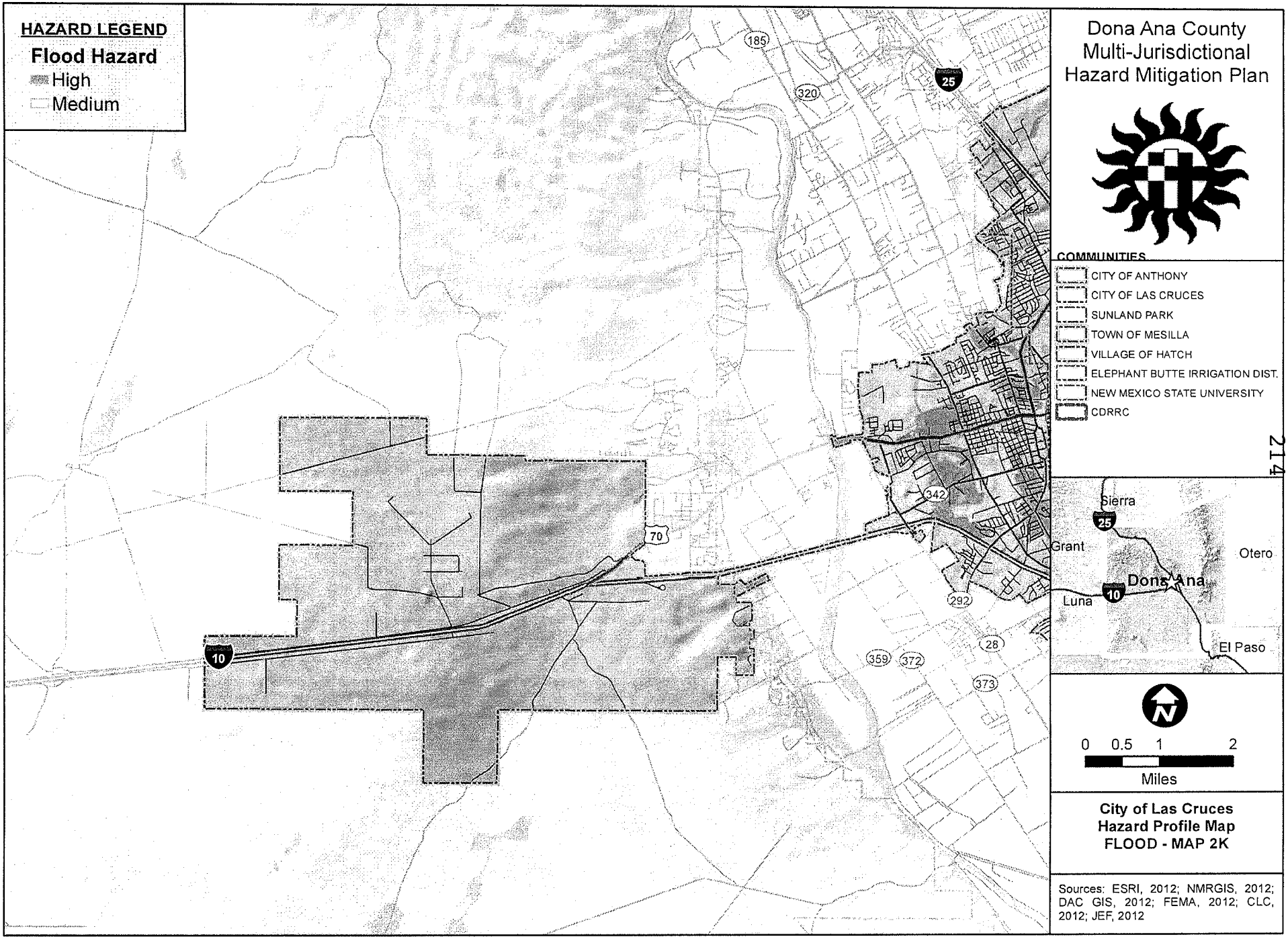
- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

0 0.5 1 2

Miles

City of Las Cruces
Hazard Profile Map
FLOOD - MAP 2J

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012


HAZARD LEGEND
Flood Hazard
High
Medium
185
320
25
342
70
292
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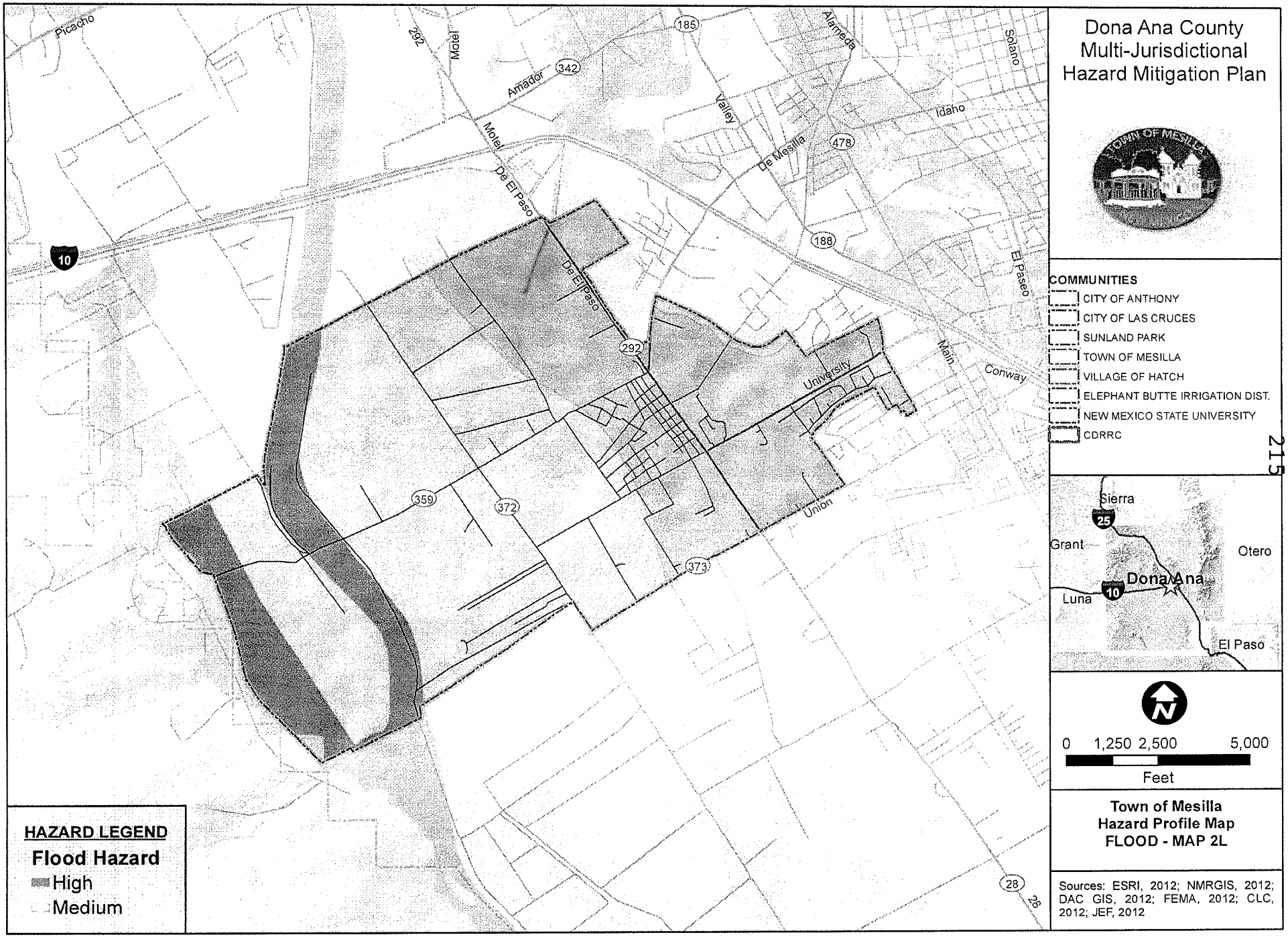
359
372
373
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 0.5 1 2
Miles
City of Las Cruces
Hazard Profile Map
FLOOD - MAP 2K
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

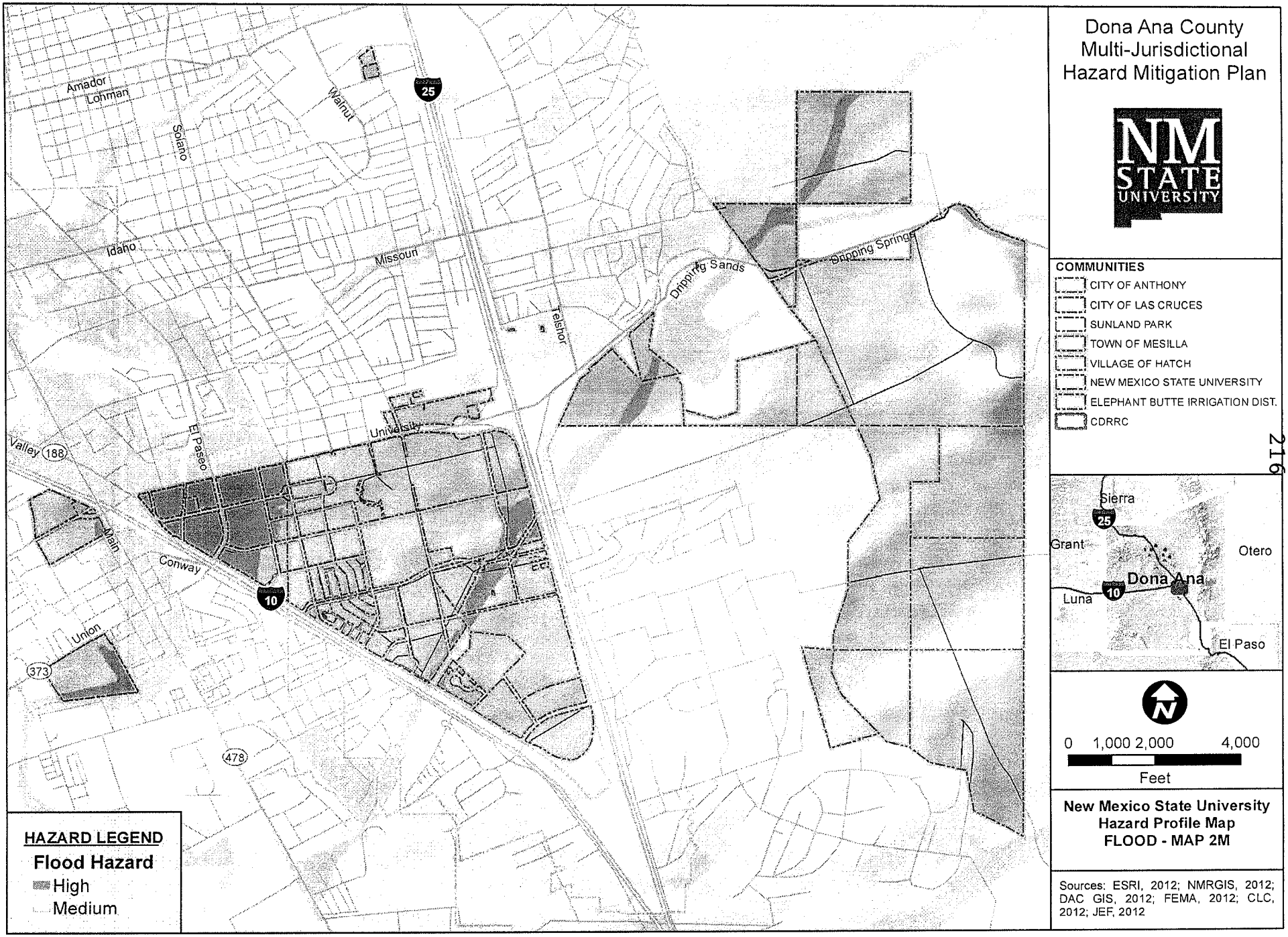
- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

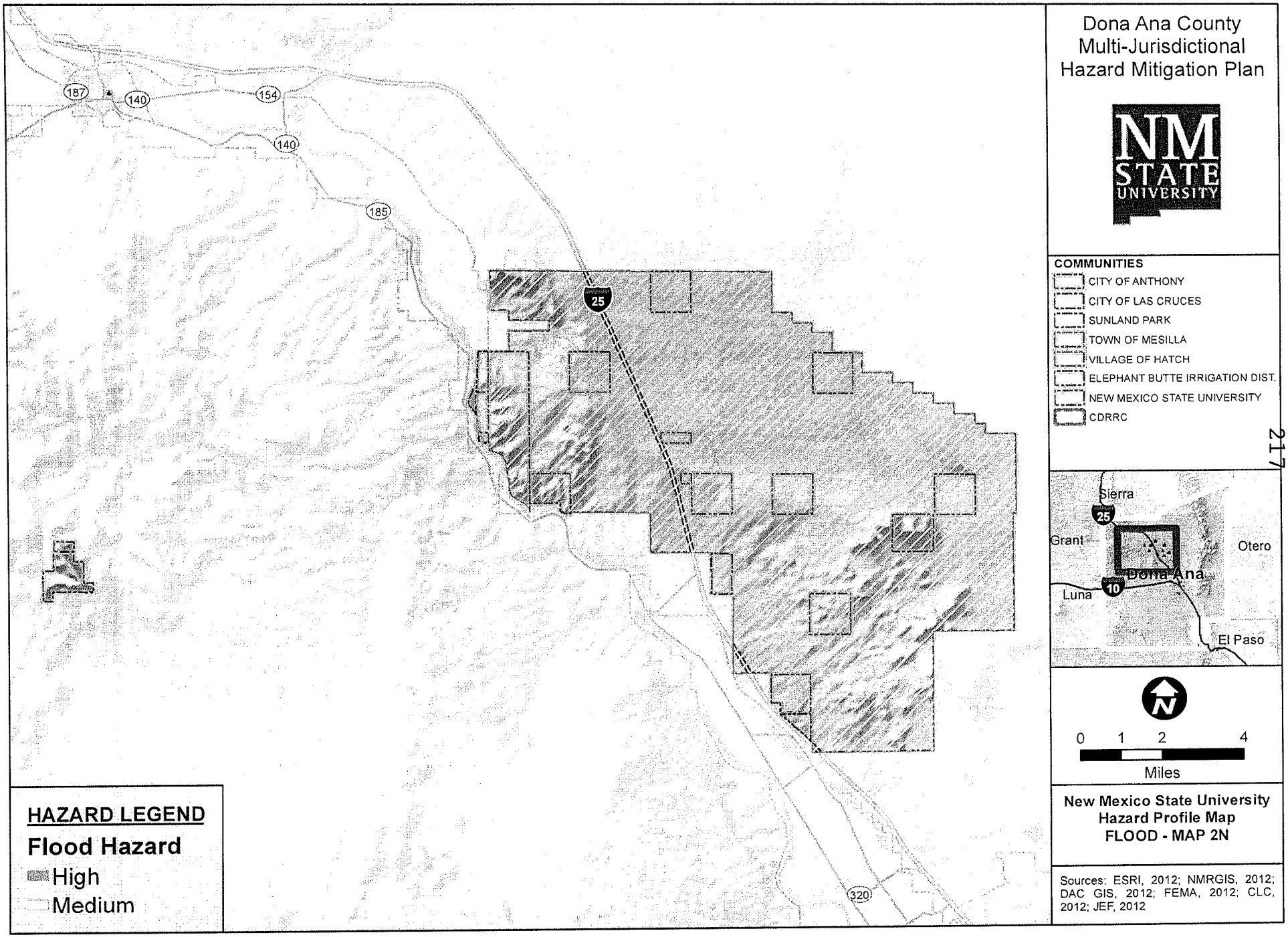
0 1,250 2,500 5,000

Feet

Town of Mesilla
Hazard Profile Map
FLOOD - MAP 2L

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012


Amador
Lohman
Solano
Walnut
25
Idaho
Missouri
Dripping Sands
Dripping Springs
Telshor
University
El Paseo
Valley
188
Main
Conway
10
Union
373
478
HAZARD LEGEND
Flood Hazard
High
Medium
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
NM STATE UNIVERSITY
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
NEW MEXICO STATE UNIVERSITY
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 1,000 2,000 4,000
Feet
New Mexico State University
Hazard Profile Map
FLOOD - MAP 2M
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012



Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan

NM STATE UNIVERSITY

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

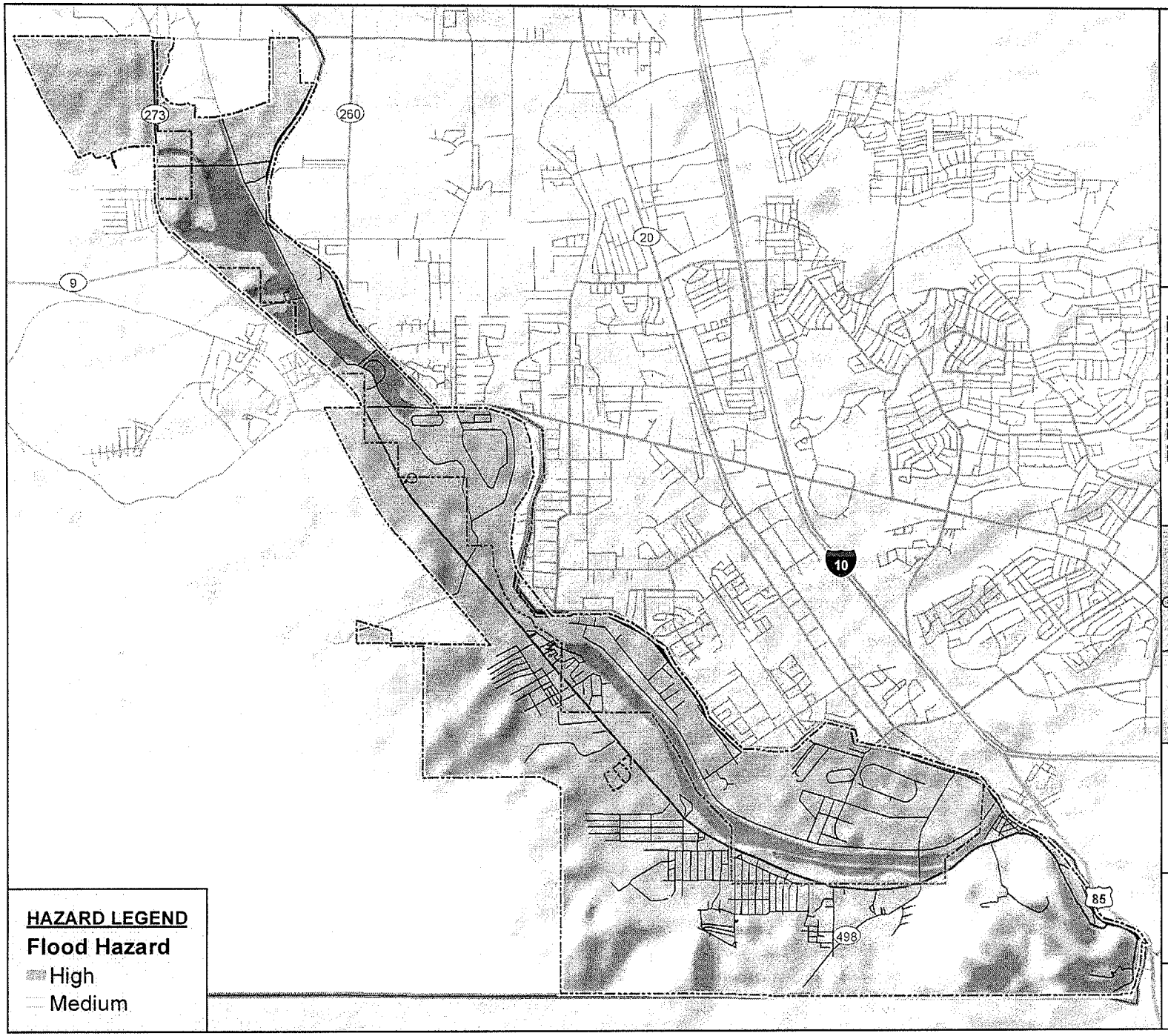
N

0 1 2 4

Miles

New Mexico State University
Hazard Profile Map
FLOOD - MAP 2N

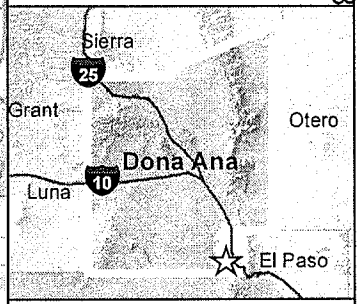
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- CITY OF SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY



0 2,000 4,000 8,000

Feet

HAZARD LEGEND

Flood Hazard

- High
- Medium

Sunland Park
Hazard Profile Map
FLOOD - MAP 20

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; FEMA, 2012; CLC, 2012; JEF, 2012

3.3.5 Severe Wind

Description

The hazard of severe wind encompasses all climatic events that produce damaging winds. For Doña Ana County, severe winds usually result from either extreme pressure gradients that can occur at any time of year, but are most common during the late fall, early winter and spring. The other primary source of damaging winds are those that accompany thunderstorms. Thunderstorms can occur year-round and are usually associated with cold fronts in the winter, monsoon activity in the summer, and tropical storms in the late summer or early fall.

Three types of damaging wind related features typically accompany a thunderstorm; 1) downbursts, 2) straight line winds, and infrequently, 3) tornadoes.

Downbursts are columns of air moving rapidly downward through a thunderstorm. When the air reaches the ground, it spreads out in all directions, creating horizontal wind gusts of 80 mph or higher. Downburst winds have been measured as high as 140 mph. Some of the air curls back upward with the potential to generate a new thunderstorm cell. Downbursts are called macrobursts when the diameter is greater than 2.5 miles, and microbursts when the diameter is 2.5 miles or less. They can be either dry or wet downbursts, where the wet downburst contains precipitation that continues all the way down to the ground, while the precipitation in a dry downburst evaporates on the way to the ground, decreasing the air temperature and increasing the air speed. In a microburst the wind speeds are highest near the location where the downdraft reached the surface, and are reduced as they move outward due to the friction of objects at the surface. Typical damage from downbursts includes uprooted trees, downed power lines, mobile homes knocked off their foundations, block walls and fences blown down, and porches and awnings blown off homes.

Straight line winds are developed similar to downbursts, but are usually sustained for greater periods as a thunderstorms reaches the mature stage, traveling parallel to the ground surface at speeds of 75 mph or higher. These winds are frequently responsible for generating dust storms and sand storms, reducing visibility and creating hazardous driving conditions.

A tornado is a rapidly rotating funnel (or vortex) of air that extends toward the ground from a cumulonimbus cloud. Most funnel clouds do not touch the ground, but when the lower tip of the funnel cloud touches the earth, it becomes a tornado and can cause extensive damage. For Doña Ana County, tornadoes are the least common severe wind to accompany a thunderstorm.

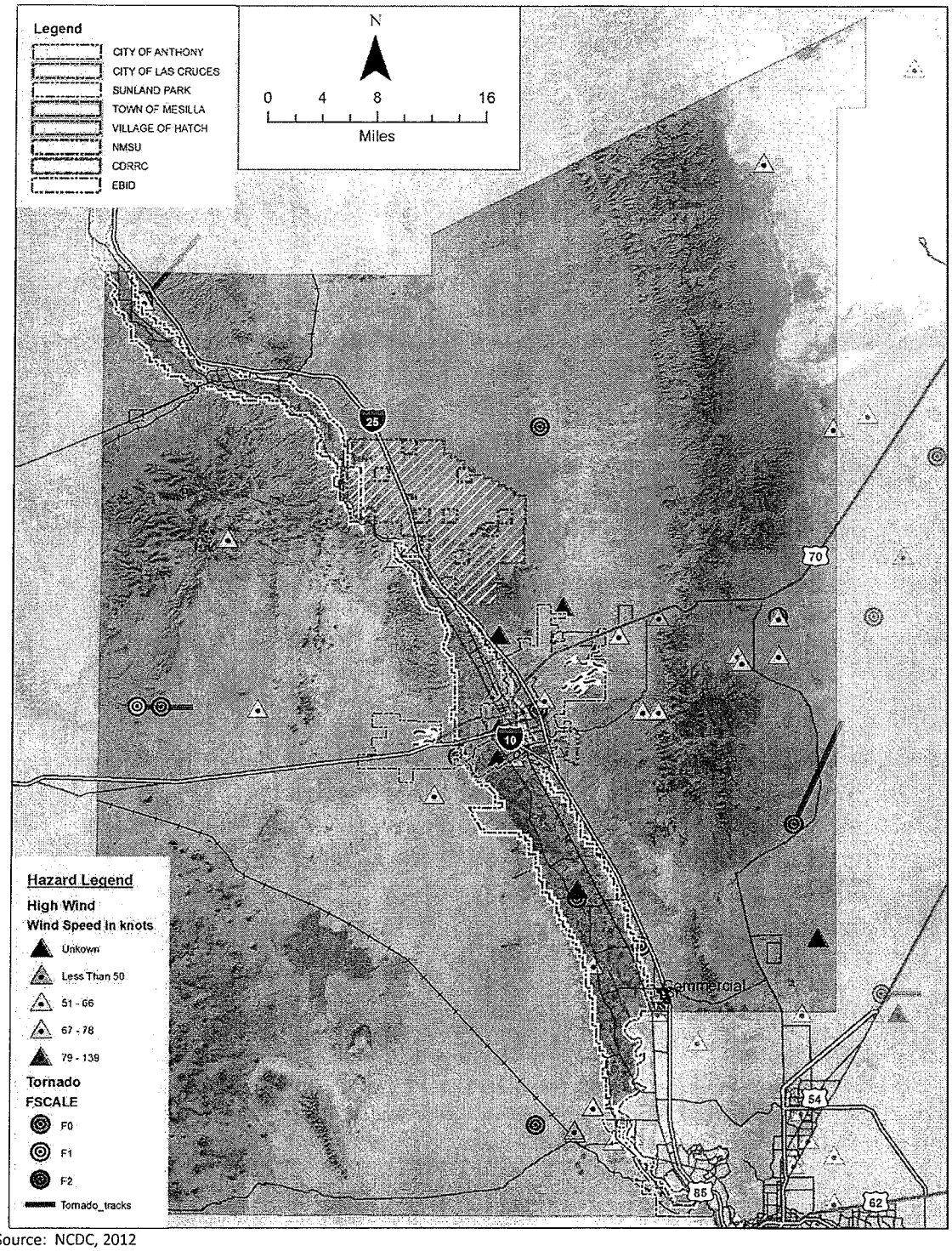
History

According to Table 3-2, there have been over 85 severe wind events documented for Doña Ana County with at least 2 associated injuries and almost $3.0 million in reported damages. In reality, strong winds are a way of life for most areas of the County and severe wind events occur on a regular basis and especially during the spring and early summer months. These events do not always have reported damages however.

The following are examples of significant severe wind events that have occurred in the last five years:

- In September 2006, A heavy precipitation supercell thunderstorm tracked from far eastern Luna County eastward along Interstate 10 through Las Cruces. This storm produced severe winds and dropped golf ball size hail throughout most of its lifetime. Wind damage from a possible tornado occurred at the state fairgrounds west of Las Cruces (mainly to outbuildings and trees), while a tornado was sighted briefly just west of Mesilla by a Las Cruces police officer. The combination of hail and wind damages were estimated to total more than $10 million. NMSU reported damage to several buildings and an airplane due to the severe wind and hail, with estimates totaling over $370,000. (NCDC, 2012; NMSU, 2012).
- In December 2008, wind gusts of 60 to 67 mph were measured at White Sands Missile Range Headquarters. A gust of 97 mph was measured near San Augustine Pass. Windows were blown out of vehicles at the WSMR main post, with damages estimated to exceed $10,000. NMSU reported that severe winds blew a roof off causing over $18,000 in damage. (NCDC, 2012; NMSU, 2012).
- In December 2009, an upper low/trough centered over the Colorado Rockies with an associated 150kt jet located over southern New Mexico and far West Texas, brought wind gusts over 100 mph to areas along and east of I-25. Considerable damage and power outages were reported in the Sacramento Mountains and east of the Organ Mountains. A peak wind gust of 83 mph was reported at the KE28 AWOS site located 19 miles west-northwest of Holloman Air Force Base. The roof was tore off of the Directorate of Plans Training Mobilization and Security building on the White Sands Missile Range and two persons were treated for minor injuries from falling debris. Other damage on the White Sands Missile Range included downed power lines, uprooted trees, damage to other buildings including the police station, broken windows in vehicles, and overturned trailers. A roof were also blown off buildings along with downed power lines in the Chaparral area. Overall damages were estimated to exceed $2.0 million. (NCDC, 2012).
- In August 2010, wind gusts were estimated up to 65 mph in the Las Cruces area. The high winds caused a tree to split in two and the debris was scattered across two yards causing minor damages estimated at over $15,000. (NCDC, 2012; NMSU, 2012).
- In May 2011, the Village of Hatch reported that severe winds blew off roofs and knocked trees over throughout the Village. No damage estimates were made. (Hatch, 2012).

Figure 3-8 presents a depiction of historic severe wind incident locations as reported by the NCDC for the period of record up to January 2010. It is noted that this map is only intended to provide a visual view of incident locations, as provided in the NCDC database and is not intended to represent a predictive tool. There is insufficient data to establish any significant patterns or areas of increased risk due to high wind events.



Source: NCDC, 2012

Figure 3-8: Map of Severe Wind events for Doña Ana County

Probability

Many severe wind events are associated with thunderstorms. The probability of a severe thunderstorm occurring with high velocity winds increases as the average duration and number of thunderstorm events increases. The average duration of thunderstorms in Doña Ana County ranges from 30 to 60 minutes with approximately 40 events per year and most concentrated during the May to August timeframe.

Extent/Magnitude

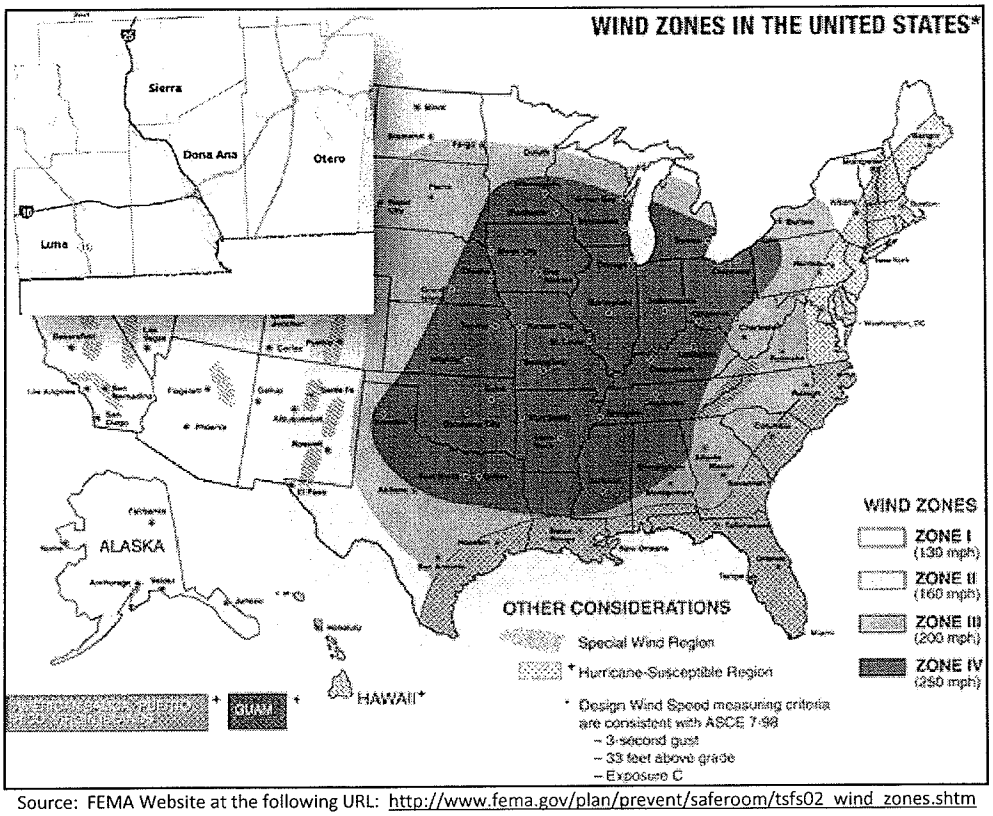
The NWS issues a severe thunderstorm watch when conditions are favorable for the development of severe thunderstorms. The local NWS office considers a thunderstorm severe if it produces hail at least 3/4-inch in diameter, wind of 58 mph or higher, or tornadoes. When a watch is issued for a region, residents are encouraged to continue normal activities but should remain alert for signs of approaching storms, and continue to listen for weather forecasts and statements from the local NWS office. When a severe thunderstorm has been detected by weather radar or one has been reported by trained storm spotters, the local NWS office will issue a severe thunderstorm warning. A severe thunderstorm warning is an urgent message to the affected counties that a severe thunderstorm is imminent. The warning time provided by a severe thunderstorm watch may be on the order of hours, while a severe thunderstorm warning typically provides an hour or less warning time.

The American Society of Civil Engineers (ASCE) has identified a 3-second wind gust speed as the most accurate measure for identifying the potential for damage to structures, and is recommended as a design standard for wind loading. Most of Doña Ana County is designated with a design 3-second gust wind speed of 90 mph, indicating relatively low levels of risk from severe winds (ASCE, 1999). Likewise, FEMA identifies two design wind speed zones, Zone I and Zone II, as illustrated in Figure 3-9. In this zone, a design wind speed of 130 mph is recommended for the design and construction of community shelters in the western half of the county and 160 mph in the eastern half.

The Beaufort Wind Scale, shown below, provides a measure of wind magnitude versus expected damages. The Beaufort scale, indicated by Table 3-12 [32], is useful because it specifically addresses wind effects on land based on wind speed.

Based on the historic record, the possibility of tornados occurring in Doña Ana County is probable. Tornado damage severity is measured by the Fujita Tornado Scale, which assigns a numerical value of 0 to 5 based on wind speeds, as shown in Table 3-13, with the letter F preceding the number (e.g., FO, F1, F2). Most tornadoes last less than 30 minutes, but some last for over an hour. The path of a tornado can range from a few hundred feet to miles. The width of a tornado may range from tens of yards to more than a quarter of a mile.

[32] Scale as depicted in the NM Natural Hazard Mitigation Plan, page 55.



Source: FEMA Website at the following URL: http://www.fema.gov/plan/prevent/saferoom/tsfs02_wind_zones.shtm
INSET: NMDHSEM, 2010

Figure 3-9
Illustration of FEMA Wind Zones

Table 3-12: Beaufort Scale

Beaufort Wind Scale			
Beaufort Number	Wind Speed mph	Description	Land Conditions
0	0	Calm	Calm. Smoke rises vertically.
1	1-3	Light air	Wind motion visible in smoke.
2	4-7	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8-12	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13-18	Moderate breeze	Dust and loose paper rises. Small branches begin to move.
5	19-24	Fresh breeze	Smaller trees sway.
6	25-31	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	32-38	Near gale	Whole trees in motion. Effort needed to walk against the wind.
8	39-46	Gale	Twigs broken from trees. Cars veer on road.
9	47-54	Strong gale	Light structure damage.
10	55-63	Storm	Trees uprooted. Considerable structural damage.
11	64-73	Violent storm	Widespread structural damage.
12	73-95	Hurricane	Considerable and widespread damage to structures.

Table 3-13: Fujita Tornado Scale		
Category	**Wind Speed**	**Description of Damage**
F0	40-72 mph	Light damage. Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage to sign boards.
F1	73-112 mph	Moderate damage. The lower limit is the beginning of hurricane speed. Roof surfaces peeled off; mobile homes pushed off foundations or overturned; moving autos pushed off roads.
F2	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
F3	158-206 mph	Severe damage. Roofs and some walls torn off well constructed houses; trains overturned; most trees in forest uprooted; cars lifted off ground and thrown.
F4	207-260 mph	Devastating damage. Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	261-318 mph	Incredible damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100-yards; trees debarked.
Source: FEMA, 1997.		

In summary, all jurisdictions within county are considered to be equally exposed to severe wind events. Based on historic records, the predominant tornado threat is occasional F0 category tornadoes and a moderate probability of Beaufort Number 10 and 11 category wind storms.

Vulnerability – CPRI Results

Severe Wind CPRI results for each community are summarized in Table 3-14 below.

Table 3-14: CPRI results by jurisdiction for severe wind					
Participating Jurisdiction	**Probability**	**Magnitude/ Severity**	**Warning Time**	**Duration**	**CPRI Score**
Anthony	Likely	Critical	< 6 hours	< 24 hours	3.05
EBID	Highly Likely	Negligible	< 6 hours	< 1 week	2.45
Hatch	Possible	Limited	< 6 hours	< 1 week	2.40
Las Cruces	Highly Likely	Limited	6-12 hours	< 24 hours	3.05
Mesilla	Highly Likely	Negligible	> 24 hours	< 6 hours	2.35
NMSU	Highly Likely	Limited	< 6 hours	< 24 hours	3.20
Sunland Park	Likely	Limited	12-24 hours	< 24 hours	2.46
Unincorporated Doña Ana County	Highly Likely	Limited	12-24 hours	< 6 hours	2.80
				County-wide average CPRI =	**2.72**

Vulnerability – Loss Estimations

The entire county is assumed to be equally exposed to the damage risks associated with severe winds. Incidents are typically localized and damages associated with individual events are usually minor unless the event occurs within a densely populated area. Doña Ana County jurisdictions have experienced over $3.0 million in documented damages between 1956 and 2011, and a total of $2.5 million in damages from 35 events occurring since 2006 with one event causing over $2 million in damages. It is therefore reasonable to

believe that an average annual county-wide loss of over $400,000 is possible. No estimates of losses for individual jurisdictions are made due to the lack of discrete data.

Vulnerability – Development Trend Analysis

Future development will expand the exposure of life and property to the damaging effects of severe wind events. Enforcement and/or implementation of modern building codes to regulate new developments in conjunction with public education on how to respond to severe wind conditions are arguably the best way to mitigate against losses. There is no geographical significance in the available data and no individual jurisdiction assessments are provided in this Plan.

Vulnerability – Jurisdictional Summary

As demonstrated in the previous discussions, there is little geographic difference in the severity of exposure to Severe Wind within the County and especially within the populated areas of the County. Accordingly, all of the participating jurisdictions except EBID are considered to be equally vulnerable to the hazard of Severe Wind, as summarized by the following crosswalk.

For the most part, EBID facilities and infrastructure are not greatly impacted by Severe Wind events, and therefore, EBID's vulnerability is considered to be at a nuisance level. For the rest of the participating jurisdictions, the given history of Severe Wind events and associated damages would indicate a county-wide vulnerability that is considered to be moderate. Accordingly, Severe Wind is a mitigation priority for all participating jurisdictions except EBID.

Jurisdiction	Vulnerability Rating	Mitigation Priority?	Notes
Anthony, Hatch, Las Cruces, Mesilla, NMSU, Sunland Park, Uninc. Doña Ana County	Moderate	Yes	There is no significant geographic variability in the severity or probability of Severe Wind events within the populated areas of the County. Since Severe Wind events primarily impact buildings and above ground structures, all of the listed jurisdictions are considered to be equally vulnerable.
EBID	Nuisance	No	EBID facilities are only vulnerable to Severe Wind events at a nuisance level and EBID does not consider this hazard to be a mitigation priority.

Sources

American Society of Civil Engineers, 1999, *ASCE 7-98: Minimum Design Loads for Buildings and Other Structures*.

Federal Emergency Management Agency, 1997, *Multi-Hazard Identification and Risk Assessment – A Cornerstone of the National Mitigation Strategy*.

U.S. Dept of Commerce, National Climatic Data Center, 2010, Storm Events Database, accessed via the following URL: http://www.ncdc.noaa.gov/stormevents/

U.S. Dept of Commerce, NOAA National Weather Service, Storm Prediction Center, SVRGIS database, accessed at the following URL: http://www.spc.noaa.gov/gis/svrgis/

Profile Maps

See Figure 3-8

3.3.6 Wildfire

Description

A wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. They often begin unnoticed, spread quickly, and are usually signaled by dense smoke. Wildfires can be human-caused through acts such as arson, unattended campfires, or the improper burning of debris, or even an errant cigarette butt. Naturally sparked wildfires are usually caused by lightning. Wildfires can be categorized into four types:

- ***Wildland fires*** occur mainly in areas under federal control, such as national forests and parks, and are fueled primarily by natural vegetation. Generally, development in these areas is nonexistent, except for roads, railroads, power lines, and similar features.
- ***Interface or intermix fires*** occur in areas where both vegetation and structures provide fuel. These are also referred to as urban-wildland interface fires.
- ***Firestorms*** occur during extreme weather (e.g., high temperatures, low humidity, and high winds) with such intensity that fire suppression is virtually impossible. These events typically burn until the conditions change or the fuel is exhausted.
- ***Prescribed fires and prescribed natural fires*** are intentionally set or natural fires that are allowed to burn for beneficial purposes.

The following three factors contribute significantly to wildfire behavior and, as detailed more fully later, can be used to identify wildfire hazard areas:

- ***Topography***: As slope increases, the rate of wildfire spread increases. South facing slopes are also subject to greater solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread, since fire spreads more slowly or may even be unable to spread downhill.
- ***Fuel:*** Wildfires spread based on the type and quantity of available flammable material, referred to as the fuel load. The basic characteristics of fuel include size and shape, arrangement and moisture content. Each fuel is assigned a burn index (the estimated amount of potential energy released during a fire), an estimate of the effort required to contain a wildfire, and an expected flame length.
- ***Weather:*** The most variable factor affecting wildfire behavior is weather. Important weather variables are temperature, humidity, wind, and lightning. Weather events ranging in scale from localized thunderstorms to large fronts can have major effects on wildfire occurrence and behavior. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signals reduced wildfire occurrence and easier containment. Wind has probably the largest impact on a wildfire's behavior, and is also the most unpredictable. Winds supply the fire with additional oxygen, further dry potential fuel, and push fire across the land at a quicker pace.

The frequency and severity of wildfires is also impacted by other hazards, such as lightning, drought, and infestations (e.g., Pine Bark Beetle, Salt Cedar and Buffelgrass). These hazards

combine with the three other wildfire contributors noted above (topography, fuel, weather) to present an on-going and significant hazard across much of New Mexico.

If not promptly controlled, wildfires may grow into an emergency or disaster. Even small grass fires can threaten lives, resources, and destroy improved properties. It is also important to note that in addition to affecting people, wildfires may severely affect livestock, pets, wildland animals, and aquatic habitat. Such events may require the emergency watering/feeding, shelter, evacuation, and increased event-caused deaths and burying of animals.

The indirect effects of wildfires can also be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways and the land itself. Soil exposed to intense heat may lose its capacity to absorb moisture and support life. Exposed soils erode quickly and the resulting siltation of rivers and streams only enhances flood potential, harms aquatic life and degrades water quality. Steep lands stripped of vegetation are also subject to increased landslide hazards.

History

According to the draft Community Wildfire Protection Plan for Doña Ana County (SWCA, 2012), there have been 817 fires in the County from 1981 to 2011. Most of these fires were under 100 acres in size and were quickly controlled and put out. The National Wildfire Coordination Group (NWCG, 2011) has archived the ICS 209 reports for wildfires greater than 100 acres for the period of 2002 to 2011. Fires greater than 1,000 acres that have occurred in the last five years are described below in chronological order:

- On February 28, 2008, the Kanuck Fire was ignited by human causes and burned an area 8 miles west of Las Cruces, on Fort Bliss, New Mexico. The fire was controlled by March 7, 2008 and burned a total of 450 acres. (NWGC, 2011).
- On March 18, 2008, the River Fire was ignited by human causes and burned an area 7 miles SW of Hatch, New Mexico. The fire was controlled by March 27, 2008 and burned a total of 1,050 acres. One home was destroyed and two were damaged. (NWCG, 2011).
- On June 14, 2008, the Dripping Springs Fire was ignited by human causes and burned an area east of Las Cruces, New Mexico at Dripping Springs. The fire was contained June 19, 2008 and burned a total of 1,735 acres. Fire suppression costs were estimated at over $525,000 and one outbuilding was damaged. (NWCG, 2011).
- On June 15, 2010, the Fort Bliss 2 Fire was ignited by human causes and burned an area south of Soledad Canyon, New Mexico. The fire was contained June 25, 2010 and burned a total of 5,160 acres. Fire suppression costs were estimated at over $900,000. (NWCG, 2011).
- On June 20, 2010, the Long Canyon Fire was ignited by human causes and burned an area four miles east of Las Cruces, New Mexico in the Organ Mountains. The fire was contained June 24, 2010 and burned a total of 2,582 acres. Fire suppression costs were estimated at over $850,000.

Maps 3A through 3D provide a graphical depiction of the 100 acre plus wildfires for the 2002-2011 period (NWGC, 2011).

As noted in the above discussions and Maps 3A through 3D, there have only been five wildfires exceeding 100 acres recorded in the NWGC database for the period of 2002-2011. All five occurred within remote areas of the unincorporated county and the 1,050 acre River Fire occurred within the EBID boundaries south of the Village of Hatch.

In 2010, the New Mexico State Forestry Division completed the *New Mexico Statewide Natural Resources Assessment & Strategy and Response Plans* (ENMRD Forestry Division, 2010). A portion of that effort included an assessment of the forest health and wildfire risks for the State of New Mexico and the development of a wildfire risk map. A component of that data used to develop the risk map was a depiction of ignition densities at a one square kilometer resolution. The ignition density map was generated using 1987 to 2008 historic wildfire ignition point data obtained from New Mexico State Forestry, BLM, BIA, and USFS. Figure 3-10 depicts the ignition densities for Doña Ana County. For the 20-year period of record, the majority of the county is shown to have no ignitions, including Anthony, Hatch, and Sunland Park. EBID, Las Cruces, Mesilla, and NMSU (including the CDRCC) all have areas of one or more ignitions per square kilometer.

Probability

There are no readily available probability statistics for wildfire occurrence in the County. Based on the historic record however, the probability of the occurrence of at least one wildfire within the County limits is nearly 100%.

Extent/Magnitude

The extent and magnitude of wildfire incidents for Doña Ana County are influenced by numerous factors including vegetation densities, previous burn history, hydrologic conditions, climatic conditions such as temperature, humidity, and wind, ignition source (human or natural), topographic aspect and slope, and remoteness of area.

Doña Ana County and various cooperating stakeholders have collaborated to prepare the Doña Ana County CWPP (SWCA, 2012), which establishes the Wildland Urban Interface (WUI) areas for the county and maps various wildfire risk elements such as vegetative fuels and densities, topographical slope and aspect, previous burn areas and ignition points, and prior treatment areas, rate of spread, crown speed, etc. Maps from the CWPP depicting estimates for Flame Length, Fireline Intensity, Rate of Spread, and Crown Fire Activity are presented in Figures 3-11 through 3-14. Each map provides both a geographic extent and overall range of intensity for each of these wildfire characteristics. In general, the more severe areas tend to be located in the mountainous and plateau areas of the county where vegetation densities are higher and slopes are steeper. The majority of the Rio Grande valley area is generally classified in the less severe ranges of these characteristics and is generally where most of the population is located.

Wildfire sizes in the county have historically ranged from 1 acre to over 5,000 acres, with the majority being less than 100 acres. For the more populace areas of the county, it is expected that the majority of fire sizes will be limited to 100 acres or less, primarily due to the less severe nature of the fires and a faster response time. Larger fires are expected to be limited to the unpopulated plateau and mountainous areas, with limited frequency.

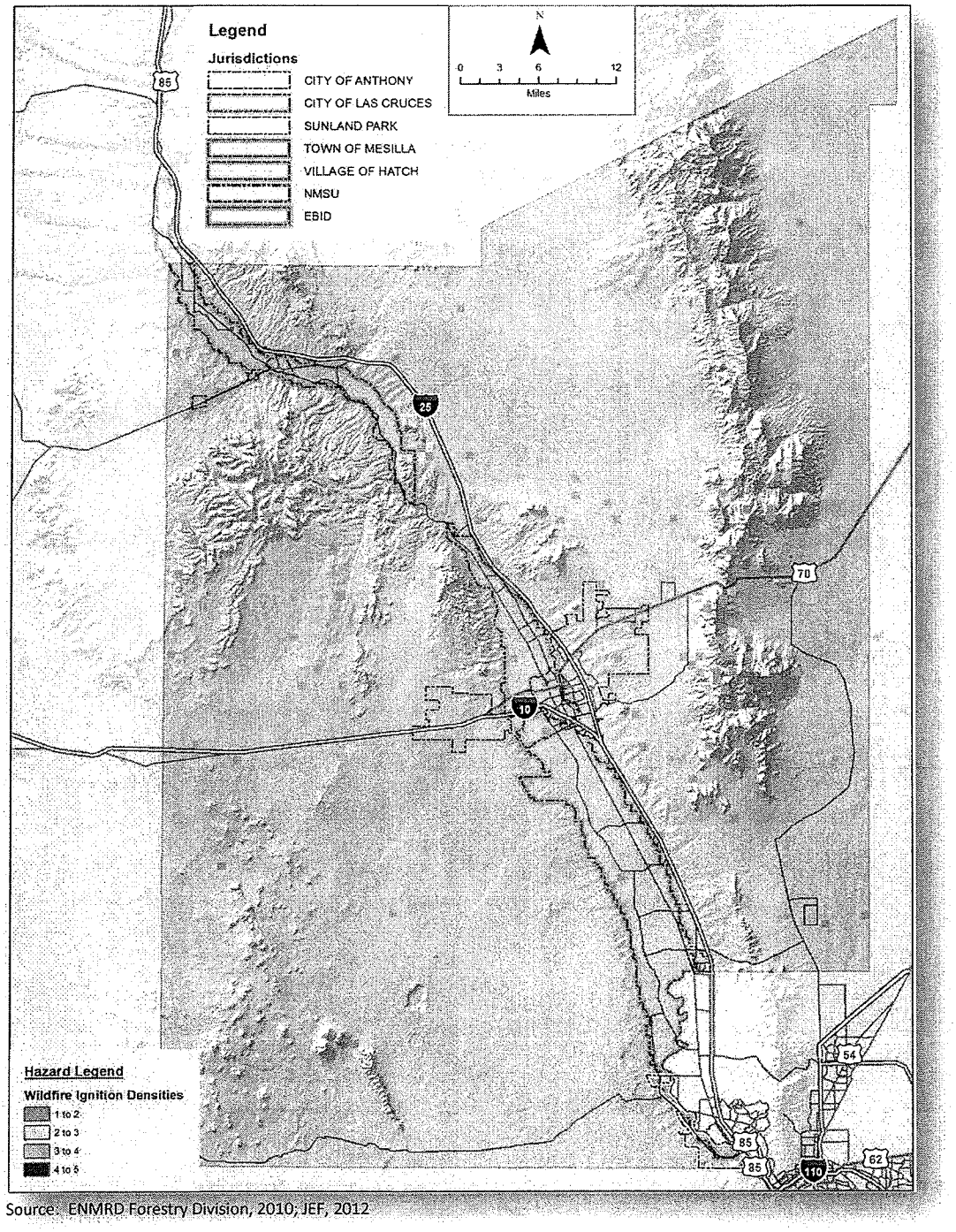
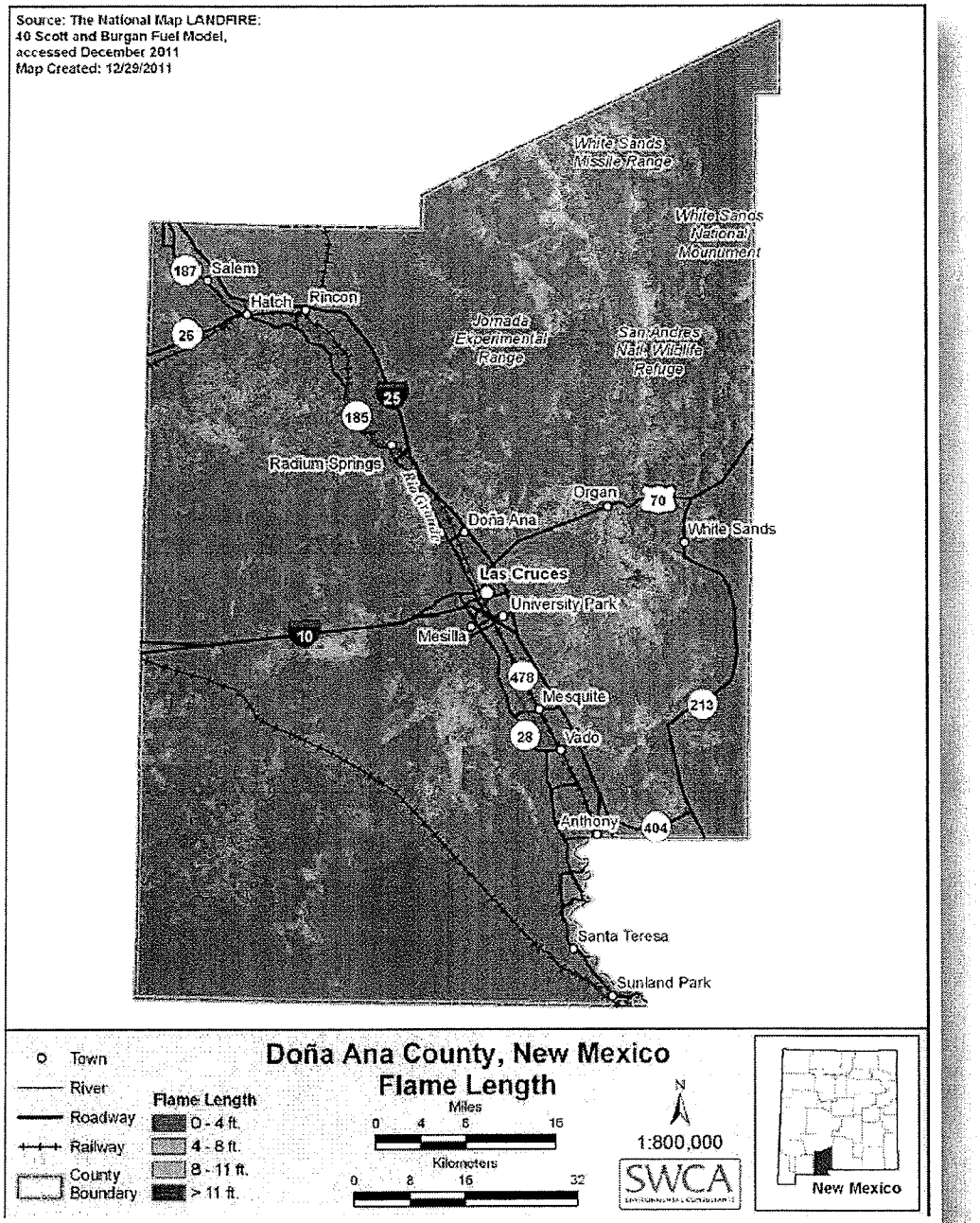


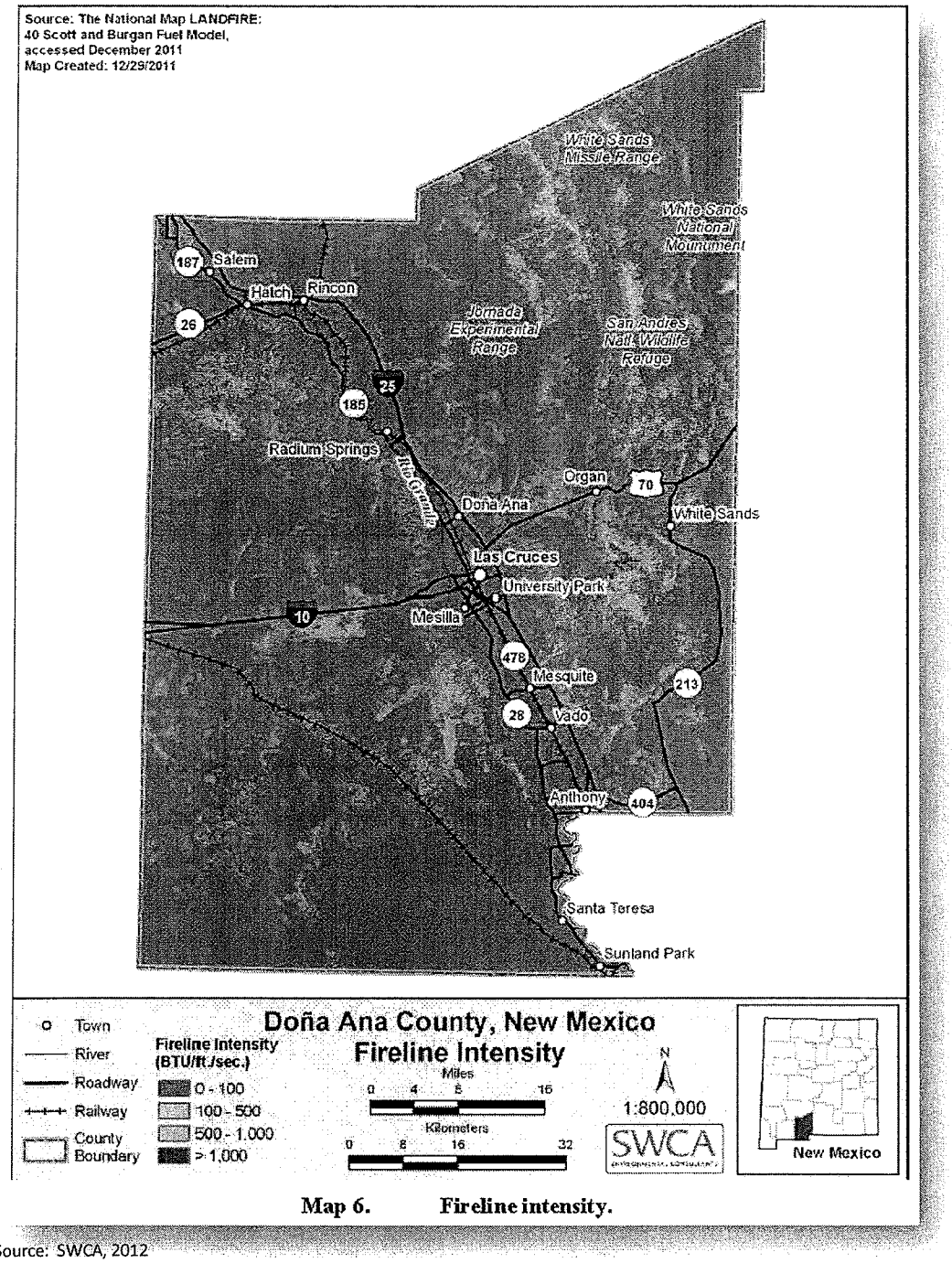
Figure 3-10
Wildfire ignition densities for 1987-2008



Map 5. Flame length.

Source: SWCA, 2012

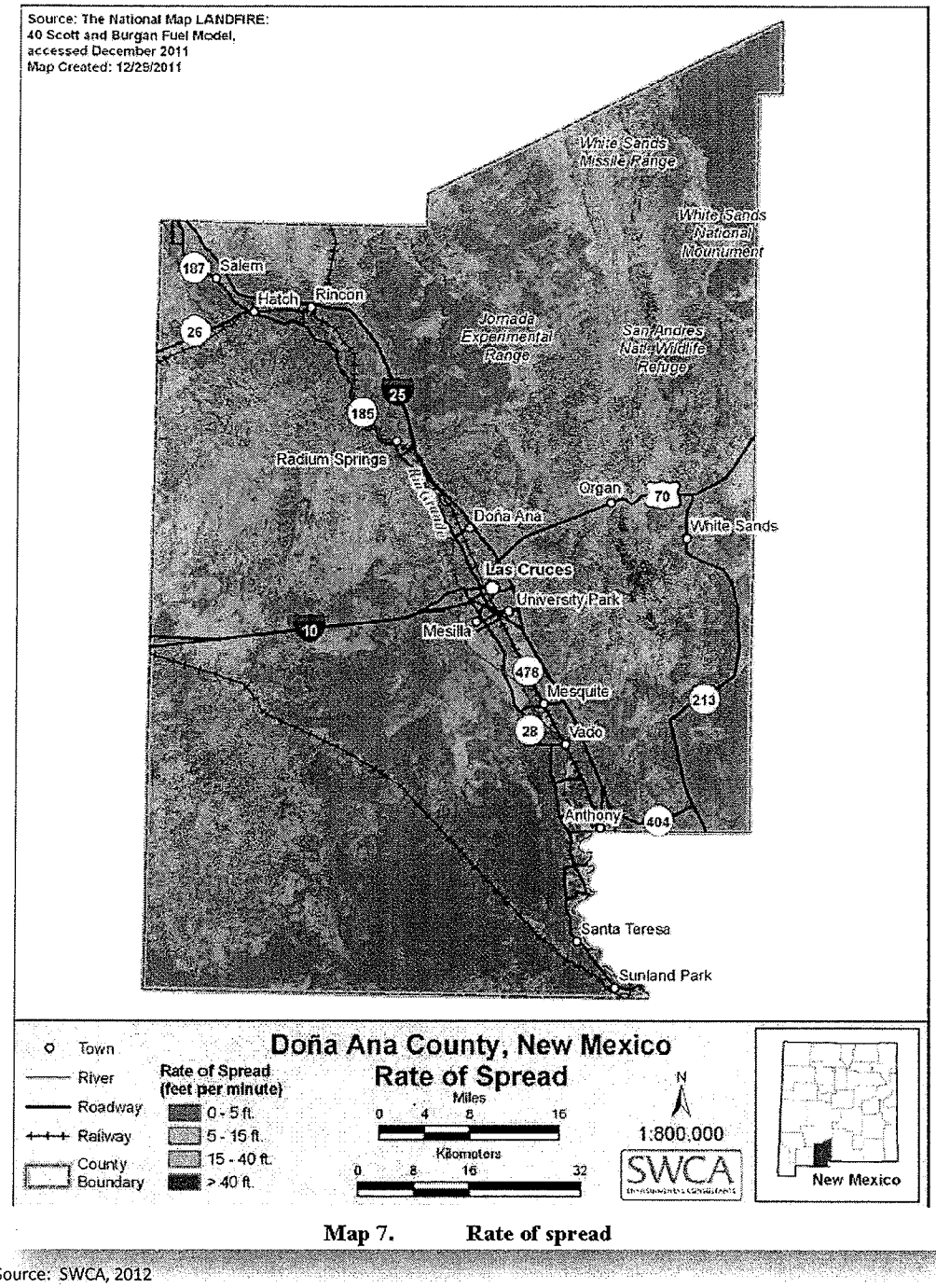
Figure 3-11
CWWP wildfire flame length map



Map 6. Fireline intensity.

Source: SWCA, 2012

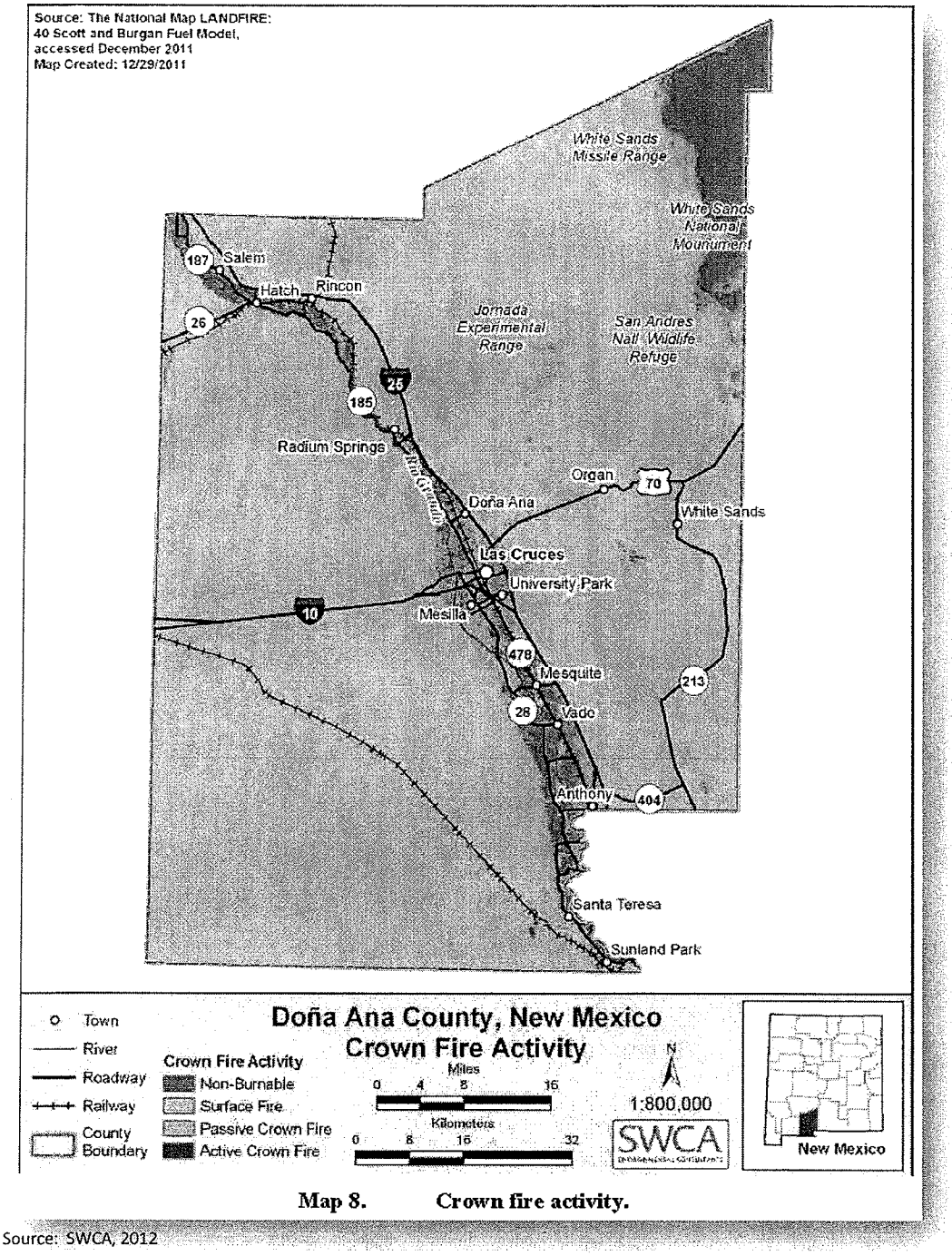
Figure 3-12
CWWP fireline intensity map



Map 7. Rate of spread

Source: SWCA, 2012

Figure 3-13
CWWP wildfire rate of spread map



Map 8. Crown fire activity.

Source: SWCA, 2012

Figure 3-14
CWWP crown fire activity map

The CWPP documents the procedure used by the CWPP planning team for developing a county-wide wildfire risk coverage using GIS and various data sets and fire models, which is graphically illustrated by Figure 3-15 below. The resultant composite risk coverage is used in this Plan to represent the wildfire risk for the County. The wildfire composite risk coverage is a 30-meter (98 foot) raster grid, with raster values that range from 1-4 to represent a graduated scale of fire risk where: 1 = LOW, 2 = MEDIUM 3 = HIGH, and 4 = EXTREME. Each of these hazard classifications represent a range of severity and inherently include considerations for extent and magnitude. Each of these classifications are adopted for this Plan.

Maps 3A through 3D show the wildfire hazard areas for the entire county. Maps 3E through 3O show the wildfire hazard areas for Anthony, EBID, Hatch, Las Cruces, Mesilla, NMSU, and Sunland Park.

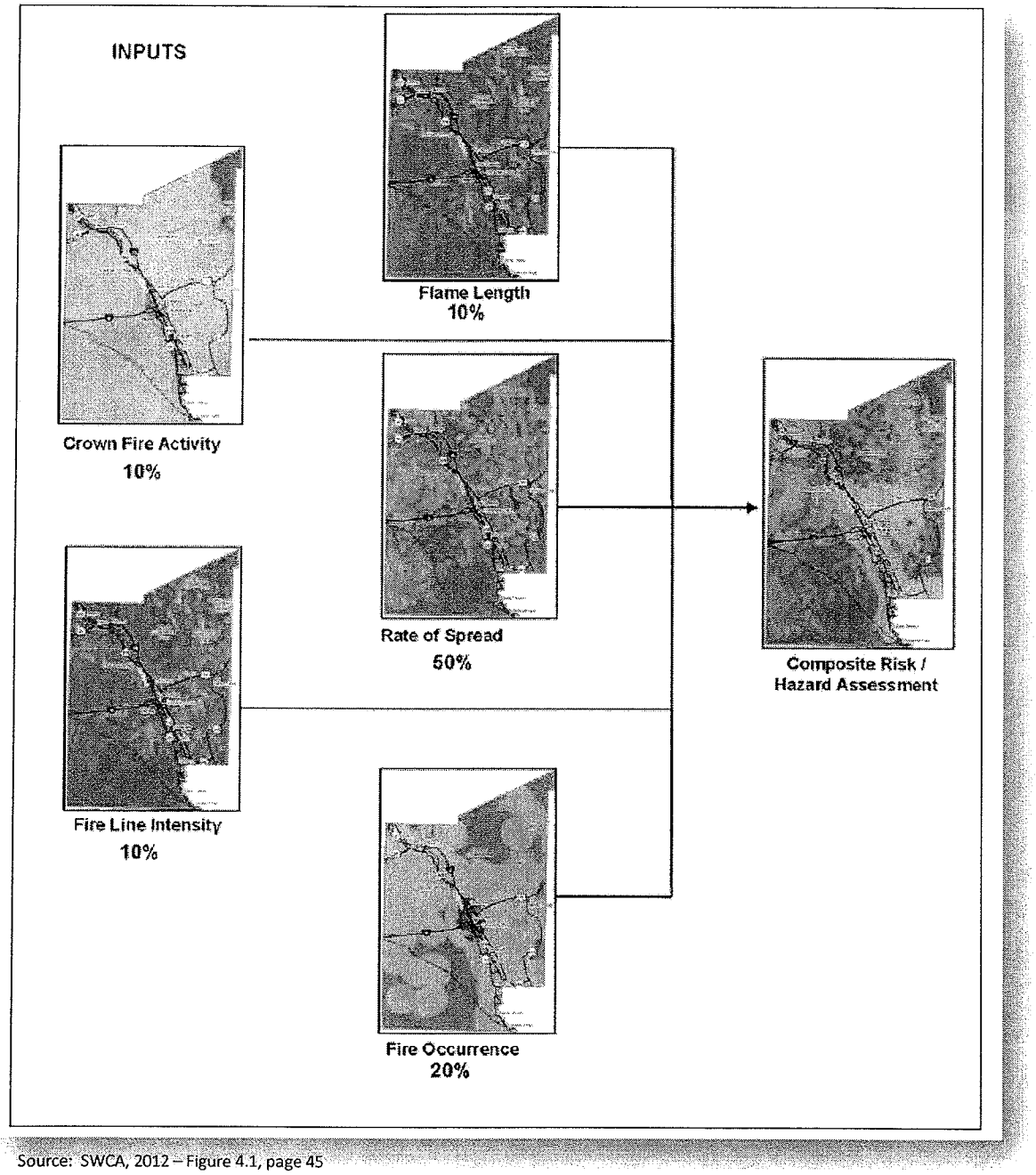
In summary, there are only very small pockets EXTREME wildfire hazard and they are mostly found in the Organ Mountains around the Organ Peak area of the Unincorporated County. There is also a very small patch of EXTREME wildfire area within Sunland Park in a dense mesquite bosque area adjacent to the Rio Grande just south of the river's entrance into the city. Most of Anthony, EBID, Hatch, and Sunland Park are characterized by LOW and MEDIUM wildfire areas. Small areas of HIGH wildfire risk are scattered throughout the jurisdictional limits and mostly occur in areas of increased vegetation and slope. Las Cruces and NMSU properties are mostly indicated to be within a MEDIUM wildfire risk with small patches of HIGH wildfire risk along the steeper arroyo canyons and areas of increased fuel loads. Mesilla is almost entirely within a MEDIUM wildfire hazard area with a few small patches of HIGH risk areas that correspond to heavier vegetative densities.

Vulnerability – CPRI Results

Wildfire CPRI results for each community is summarized in Table 3-15 below.

Table 3-15: CPRI results by jurisdiction for wildfire

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration	CPRI Score
Anthony	Unlikely	Negligible	< 6 hours	< 6 hours	1.45
EBID	Likely	Negligible	< 6 hours	< 1 week	2.55
Hatch	Unlikely	Negligible	< 6 hours	< 6 hours	1.45
Las Cruces	Unlikely	Negligible	< 6 hours	< 6 hours	1.45
Mesilla	Likely	Limited	6-12 hours	< 1 week	2.70
NMSU	Unlikely	Limited	< 6 hours	> 1 week	2.05
Sunland Park	Unlikely	Negligible	< 6 hours	< 6 hours	1.45
Unincorporated Doña Ana County	Likely	Limited	< 6 hours	< 24 hours	2.75
				County-wide average CPRI =	**1.98**



Source: SWCA, 2012 – Figure 4.1, page 45

Figure 3-15

CWPP wildfire composite risk model schematic

Vulnerability – Loss Estimations

The estimation of potential exposure to EXTREME, HIGH, and MEDIUM wildfire hazards was accomplished by intersecting the human and facility assets with the wildfire hazard limits depicted on Maps 3A – 3O. Loss to exposure ratios of 0.50 (50%), 0.20 (20%) and 0.05 (5%) were assumed to estimate losses for all facilities located within the EXTREME, HIGH, and MEDIUM wildfire hazard areas, respectively. Table 3-16 summarizes the critical facility, population, and residential housing unit exposure estimates for the HIGH and MEDIUM wildfire hazard limits. No facilities or human population were estimated to be located within and EXTREME wildfire hazard area. Estimates are reported by jurisdiction and county-wide.

In summary, $203.2 and $87.7 million in critical facility related losses are estimated for high and medium wildfire hazards, for all the participating jurisdictions in Doña Ana County. An additional $121 and $730 million in high and medium hazard wildfire losses to 2010 Census defined residential housing units are estimated for all Doña Ana County jurisdictions. It should be noted that these exposure dollar amounts do not include the cost of wildfire suppression, which can be substantial. For example, deployment of a Type 1 wildland firefight crew costs about $1 million per day. Regarding human vulnerability, a county-wide population of 7,221 and 161,566 people, or 3.45% and 77.22% of the total, are potentially exposed to a HIGH and MEDIUM hazard wildfire events, respectively. Typically, deaths and injuries not related to firefighting activities are rare. However, it is feasible to assume that at least one death and/or injury may be plausible. There is also a high probability of population displacement during a wildfire event, and especially in the urban wildland interface areas.

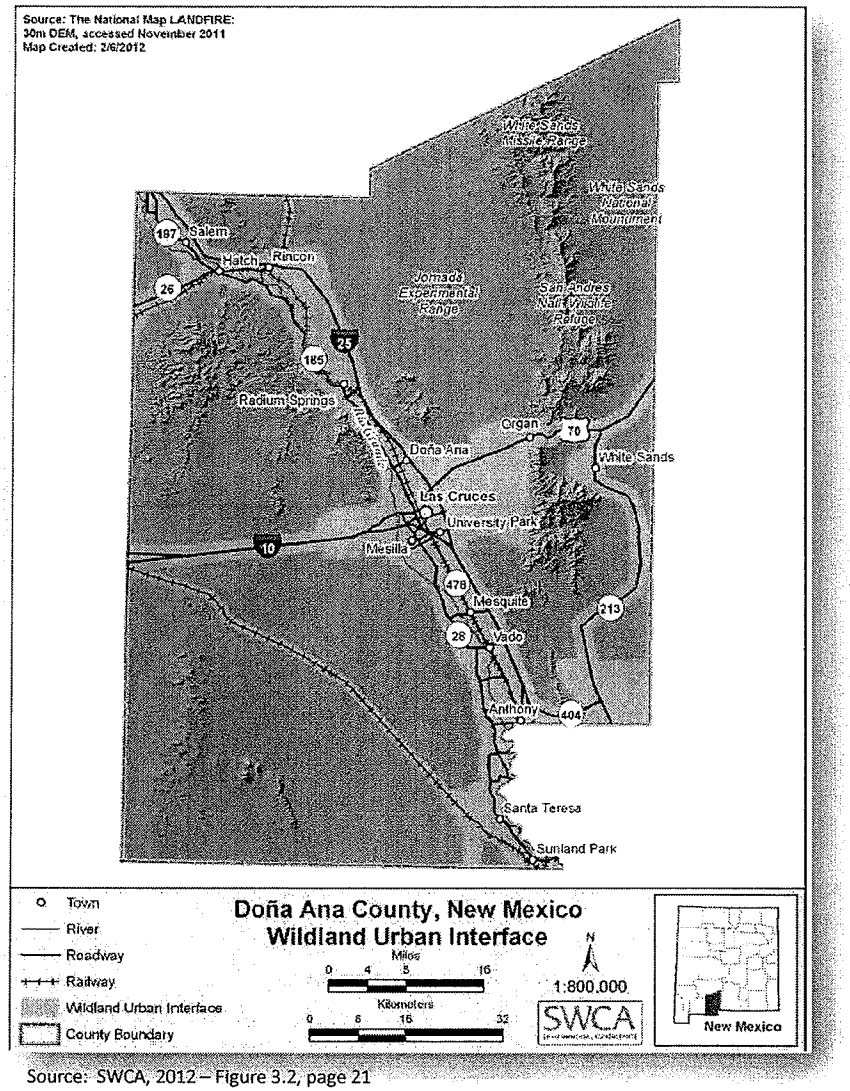
It is duly noted that the loss and exposure numbers presented above represent a comprehensive evaluation of the County as a whole. It is unlikely that a wildfire event would impact all of the HIGH and MEDIUM wildfire hazard areas at the same time. Accordingly, actual event based losses and exposure are likely to be only a fraction of those summarized above.

Table 3-16: Doña Ana County jurisdictional exposure and loss estimates due to wildfire

WILDFIRE HAZARD EXPOSURE / LOSS	Anthony	Hatch	Las Cruces	Mesilla	NMSU	Sunland Park	Uninc. Doña Ana County	Total
Total Critical Facilities and Infrastructure	**10**	**11**	**121**	**13**	**40**	**8**	**50**	**253**
Estimated Replacement Cost (x $1,000)	**$37,505**	**$14,250**	**$765,525**	**$124,520**	**$811,777**	**$16,950**	**$1,405,806**	**$3,176,333**
Facilities Exposed to High Hazard	0	1	7	0	0	0	5	13
Percentage of Total Facilities	0.00%	9.09%	5.79%	0.00%	0.00%	0.00%	10.00%	5.14%
Estimated Replacement Cost (x $1,000)	$0	$3,000	$5,800	$0	$0	$0	$1,007,105	$1,015,905
Estimated Structure Loss (x $1,000)	$0	$600	$1,160	$0	$0	$0	$201,421	$203,181
Facilities Exposed to Medium Hazard	6	6	103	13	36	2	28	194
Percentage of Total Facilities	60.00%	54.55%	85.12%	100.00%	90.00%	25.00%	56.00%	76.68%
Estimated Replacement Cost (x $1,000)	$15,705	$7,800	$668,489	$124,520	$811,355	$3,950	$121,500	$1,753,319
Estimated Structure Loss (x $1,000)	$785	$390	$33,424	$6,226	$40,568	$198	$6,075	$87,666
Total Population	**9,403**	**1,679**	**97,571**	**1,944**	**4,542**	**14,274**	**79,815**	**209,229**
Population Exposed to High Hazard	1	2	2,271	0	41	469	4,437	7,221
Percent Exposed	0.01%	0.12%	2.33%	0.00%	0.91%	3.28%	5.56%	3.45%
Population Exposed to Medium Hazard	3,093	1,257	93,365	1,944	4,194	2,911	54,800	161,566
Percent Exposed	32.90%	74.89%	95.69%	100.00%	92.34%	20.40%	68.66%	77.22%
Population Over 65	**801**	**168**	**13,316**	**439**	**58**	**1,254**	**9,844**	**25,881**
Population Over 65 Exposed to High Hazard	0	0	365	0	5	20	429	819
Percent Exposed	0.00%	0.00%	2.74%	0.00%	9.03%	1.61%	4.36%	3.17%
Population Over 65 Exposed to Medium Hazard	274	125	12,798	439	15	271	7,106	21,029
Percent Exposed	34.20%	74.62%	96.11%	100.00%	25.76%	21.61%	72.19%	81.25%
Residential Building Count Totals)	**2,803**	**566**	**42,352**	**950**	**1,356**	**4,109**	**29,354**	**81,490**
Estimated Replacement Cost (x $1,000)	**$378,421**	**$76,437**	**$10,163,529**	**$228,050**	**$324,498**	**$554,713**	**$5,422,534**	**$17,148,181**
Residences Exposed to High Hazard	0	0	1,043	0	15	123	1,588	2,768
Percentage of Total Facilities	0.01%	0.05%	2.46%	0.00%	1.12%	2.99%	5.41%	3.40%
Estimated Replacement Cost (x $1,000)	$22	$39	$250,200	$0	$3,540	$16,561	$334,993	$605,356
Estimated Structure Loss (x $1,000)	$4	$8	$50,040	$0	$708	$3,312	$66,999	$121,071
Residences Exposed to Medium Hazard	867	417	40,587	950	1,231	918	20,552	65,522
Percentage of Total Facilities	30.91%	73.65%	95.83%	100.00%	90.80%	22.34%	70.02%	10.82%
Estimated Replacement Cost (x $1,000)	$116,988	$56,295	$9,740,021	$228,049	$295,495	$123,910	$4,040,587	$14,601,345
Estimated Structure Loss (x $1,000)	$5,849	$2,815	$487,001	$11,402	$14,775	$6,195	$202,029	$730,067

Vulnerability – Development Trend Analysis

By its very definition, the WUI represents the fringe of urban development as it intersects with the natural environment. Future development that occurs at the WUI interface will only increase the WUI areas and expand the potential exposure of structures to wildfire hazards. Figure 3-16 presents a graphic of the WUI identified by the CWPP. Each growth area identified by the participating jurisdictions, should take into account the interface that may be created and take the necessary precautions to reduce the exposure to wildland fires that may burn up to the developing perimeter. Further discussions regarding particular areas within the County are documented in the CWPP and will not be discussed further herein.



Source: SWCA, 2012 – Figure 3.2, page 21

Figure 3-16

CWPP wildfire urban interface for Doña Ana County

Vulnerability – Jurisdictional Summary

The following crosswalk presents an overall summary of each jurisdiction's vulnerability to Wildfire.

Jurisdiction	Vulnerability Rating	Mitigation Priority?	Notes
Anthony, Hatch, and Sunland Park	Low	No	According the CWPP, the predominant wildfire hazard rating for these jurisdictions is LOW to MEDIUM, with a few small trace areas of HIGH. When studied in greater detail, it is apparent that for the majority of the urbanized areas within these jurisdictions, the actual vulnerability is low due to a lack of connective vegetation. For Hatch, the majority of the village is urban development with agricultural land buffering wildland fuels and considerable separation between structures. The single mesquite bosque in Sunland Park is relatively isolated from any other structures and a wildfire in this area would not pose a substantial threat to the surrounding developments.
EBID	Nuisance	No	Nearly all of EBID facilities are located within agricultural areas and are only vulnerable to wildfire at a nuisance level.
Las Cruces and Mesilla	Moderate	Yes	According the CWPP, the predominant wildfire hazard rating for these jurisdictions is MEDIUM with a few scarce pockets of HIGH. Wildfire hazard is primarily attributed to vegetation build up on vacant lots and irrigation ditches and denser vegetation along watercourses in the upper terrace areas, coupled with their proximity to occupied structures. Overall the wildfire vulnerability is considered to be moderate.
NMSU	Moderate	Yes	The majority of NMSU wildfire risk is associated with facilities within the CDRRC, which is comprised of a mix of MEDIUM and HIGH wildfire hazard areas. The wildfire vulnerability at the main campus is considered to be low. The CDRRC area is considered to be moderate.
Uninc. Doña Ana County	Moderate	Yes	The majority of population and facilities within the unincorporated county area are within MEDIUM to HIGH wildfire hazard areas. Overall the unincorporated county area is considered to have a moderate vulnerability.

Sources

ENMRD Forestry Division, 2010, *New Mexico Statewide Natural Resource Assessment & Strategy and Response Plans*. State of New Mexico, Energy, Minerals, and Natural Resources Department, Forestry Division. 1220 So. St. Francis Dr., Santa Fe, NM 87105. 147 pp.

National Wildfire Coordination Group, 2010, Historical ICS 209 reports at: http://fam.nwcg.gov/fam-web/hist_209/report_list_209

SWCA Environmental Consultants, Inc., 2012, *Doña Ana County Community Wildfire Protection Plan*, draft dated May 2012.

Profile Maps

Maps 3A through 3D – County-Wide Wildfire Hazard Maps

Maps 3E through 3O– Anthony, EBID, Hatch, Las Cruces, Mesilla, NMSU, and Sunland Park Wildfire Hazard Maps

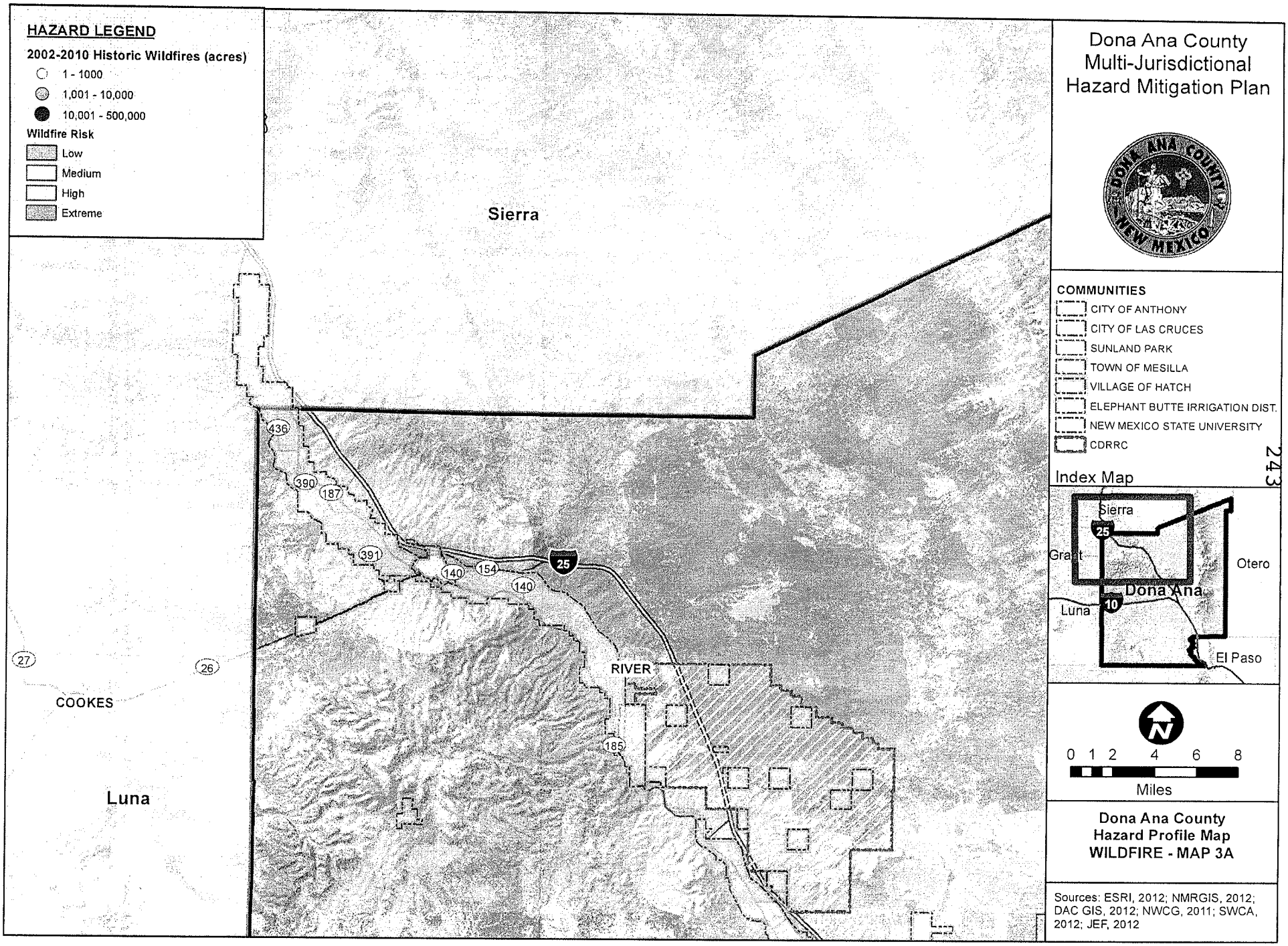
3.4 Risk Assessment Summary

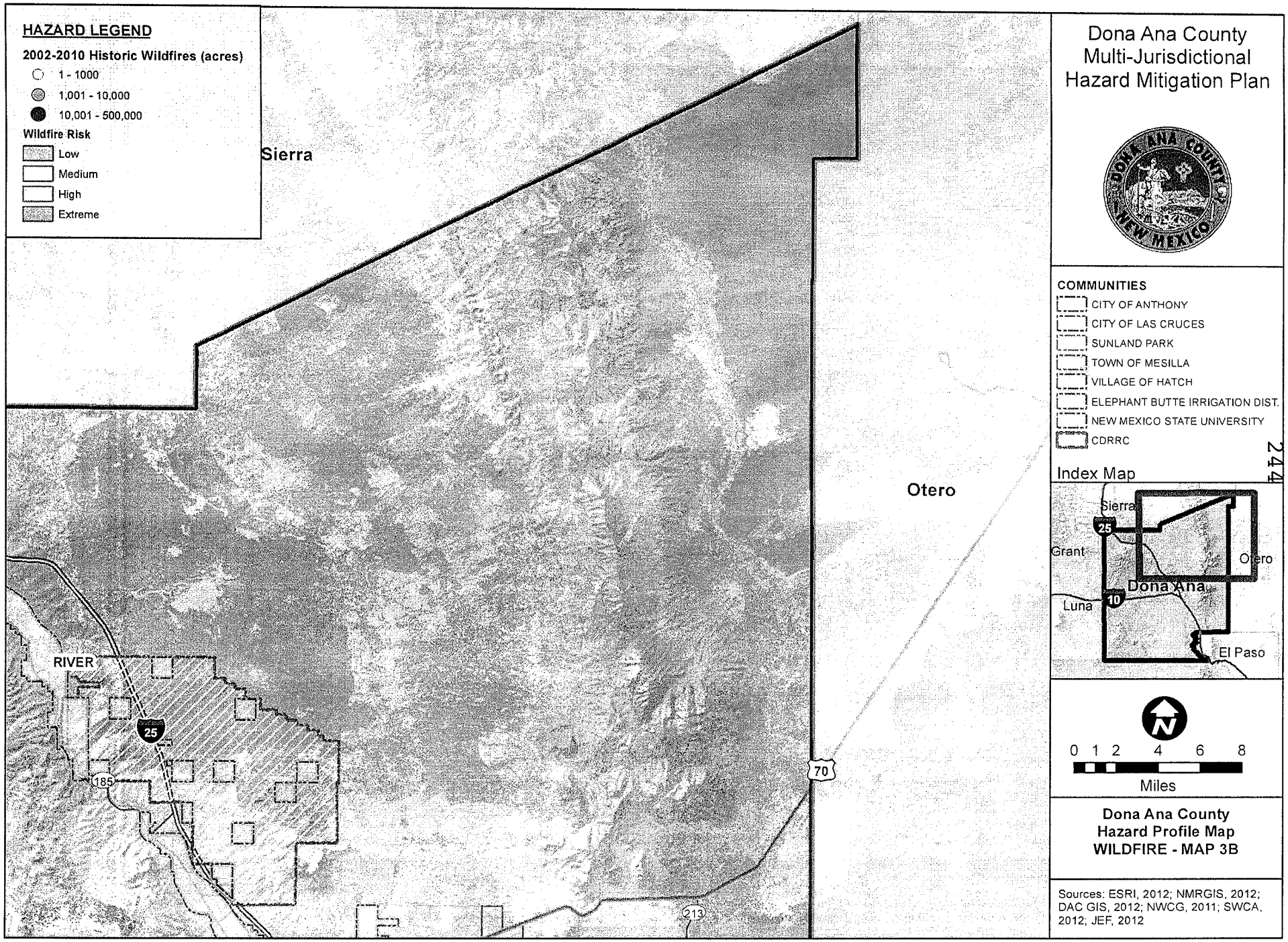
The jurisdictional variability of risk associated with each hazard assessed in Section 3.3 is demonstrated by the various CPRI and loss estimation results. Accordingly, each jurisdiction has varying levels of need regarding the hazards to be mitigated, and may not consider all of the hazards as posing a great risk to their individual communities. Table 3-17 summarizes the hazards selected as mitigation priorities by each jurisdiction and will be the basis for each jurisdiction's mitigation strategy.

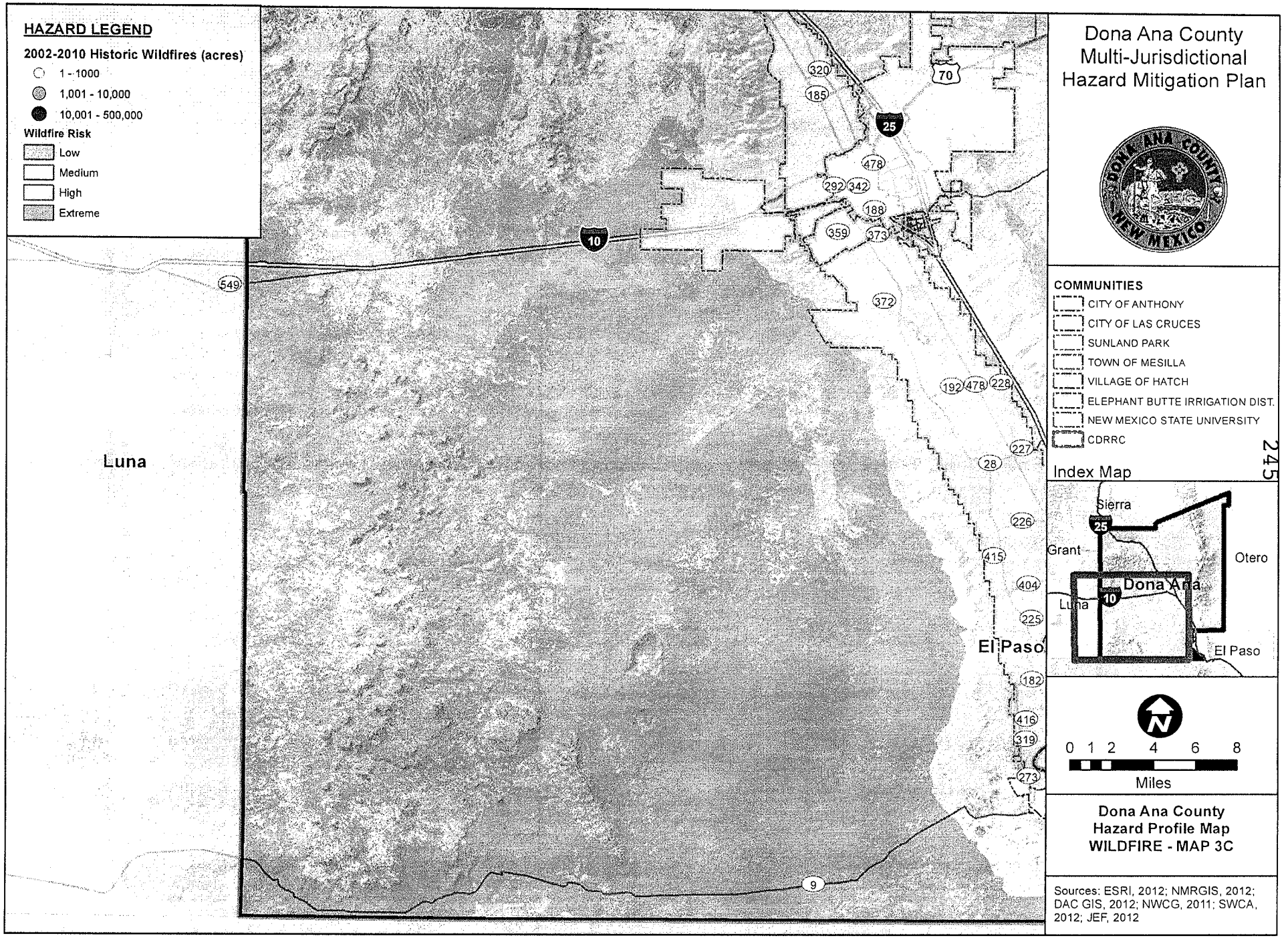
Table 3-17: Summary of mitigation priority hazards for each participating jurisdiction

Jurisdiction	Dam Failure	Drought	Extreme Cold	Flooding	Severe Wind	Wildfire
Unincorporated Doña Ana County	M	M	M	M	M	M
Anthony	M	M	L	M	M	L
EBID	M	M	NH	M	NH	NH
Hatch	M	M	L	M	M	L
Las Cruces	M	M	M	M	M	M
Mesilla	M	M	M	M	M	M
NMSU	M	M	M	M	M	M
Sunland Park	M	M	L	M	M	L

M – Mitigation A/Ps will be identified
L – Mitigation A/Ps will be identified but given a low priority
NH – Nuisance hazard - no mitigation is warranted


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Sierra
436
390
187
391
140
154
140
25
RIVER
185
27
26
COOKES
Luna
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 1 2 4 6 8
Miles
Dona Ana County
Hazard Profile Map
WILDFIRE - MAP 3A
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Sierra
Otero
RIVER
25
185
70
213
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Index Map
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
10
0 1 2 4 6 8
Miles
Dona Ana County
Hazard Profile Map
WILDFIRE - MAP 3B
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

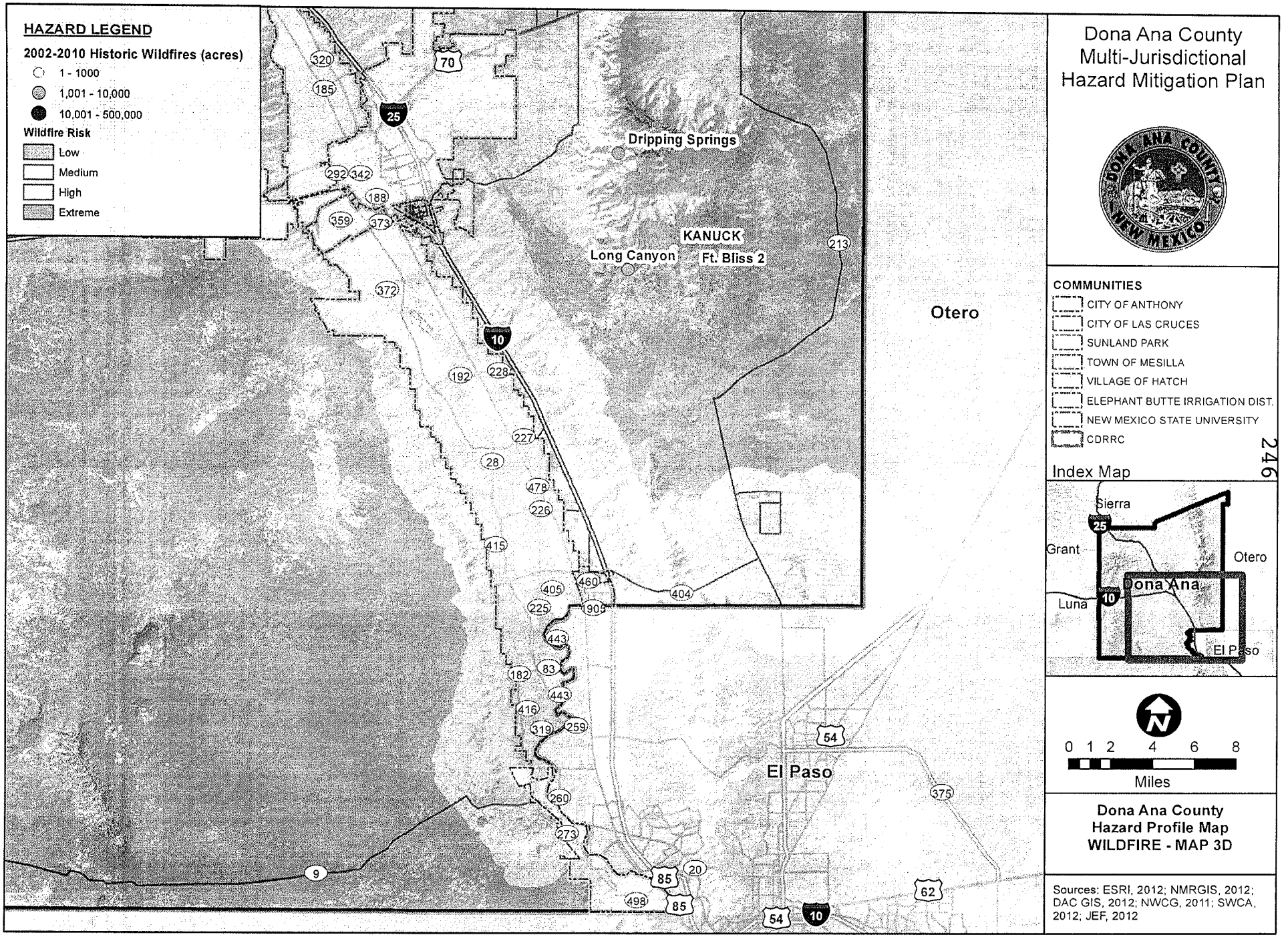
Index Map

0 1 2 4 6 8

Miles

Dona Ana County
Hazard Profile Map
WILDFIRE - MAP 3C

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

246

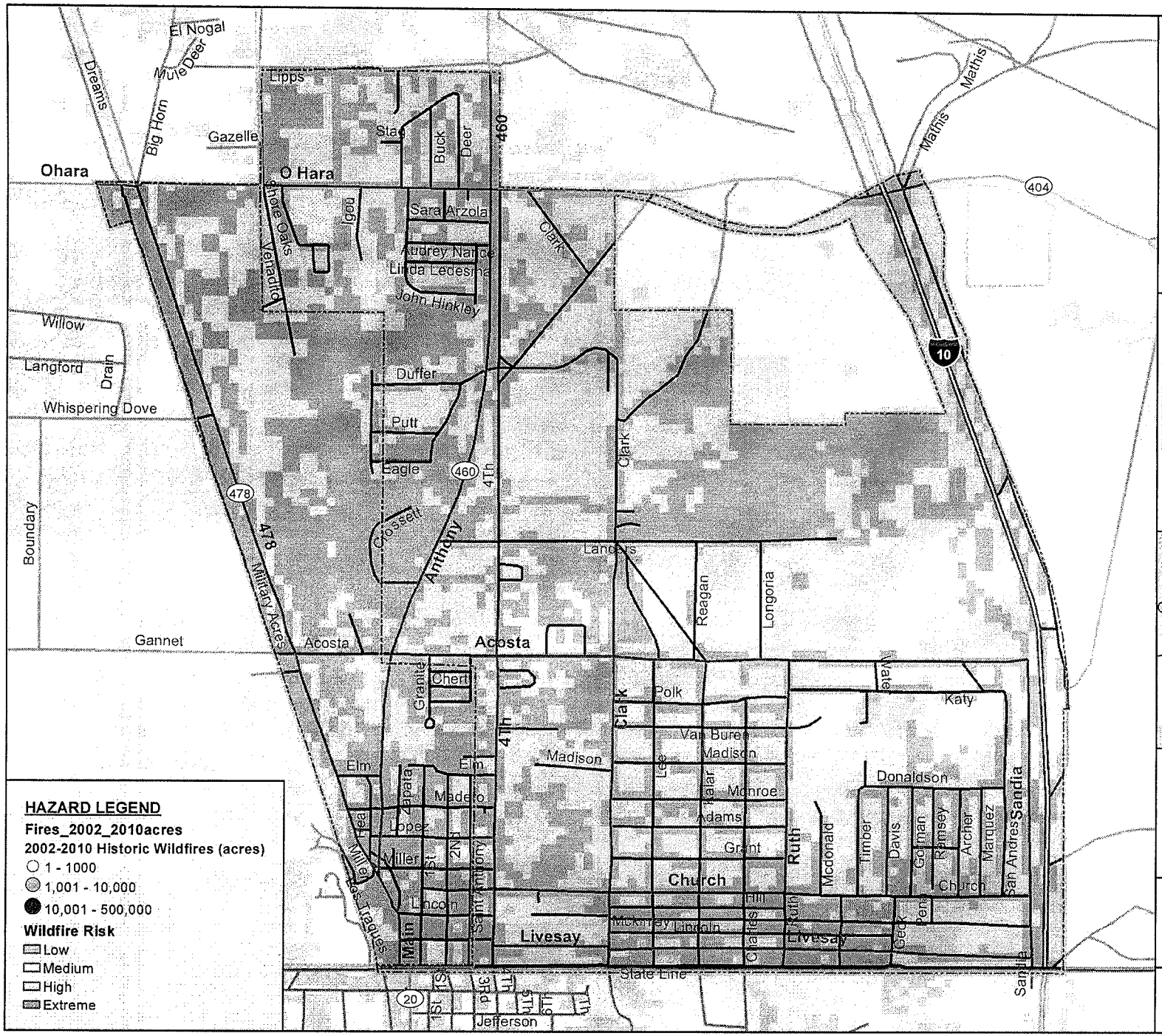
Index Map

0 1 2 4 6 8

Miles

Dona Ana County
Hazard Profile Map
WILDFIRE - MAP 3D

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012



HAZARD LEGEND

Fires_2002_2010acres

2002-2010 Historic Wildfires (acres)

- 1 - 1000
- 1,001 - 10,000
- 10,001 - 500,000

Wildfire Risk

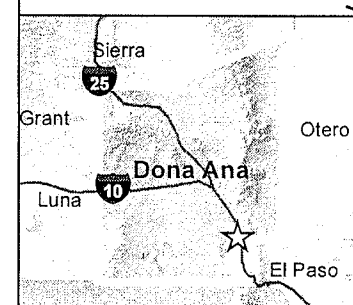
- Low
- Medium
- High
- Extreme

Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

City of Anthony New Mexico
July 1, 2010

COMMUNITIES

- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST.
- NEW MEXICO STATE UNIVERSITY
- CDRRC

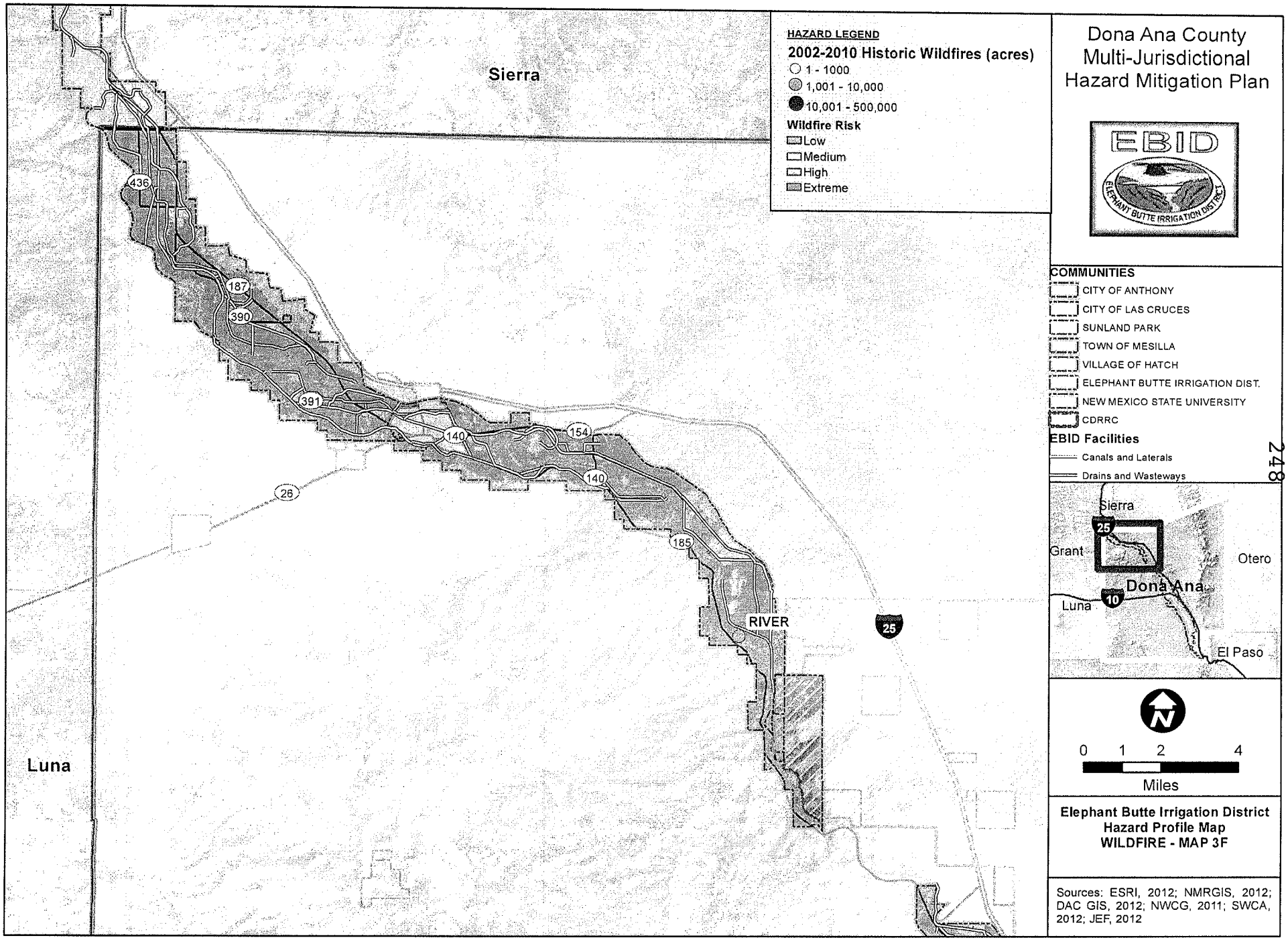


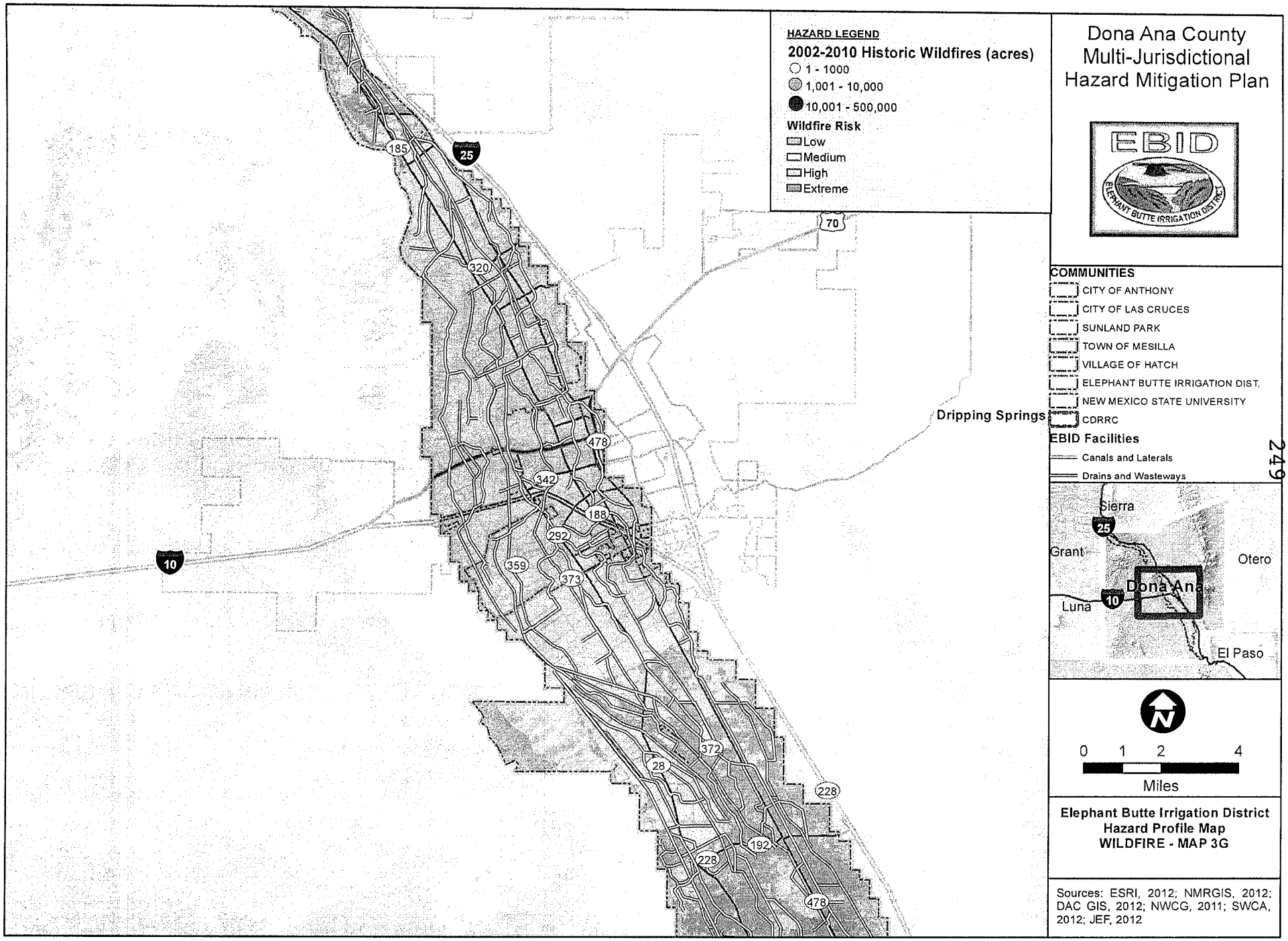
0 500 1,000 2,000

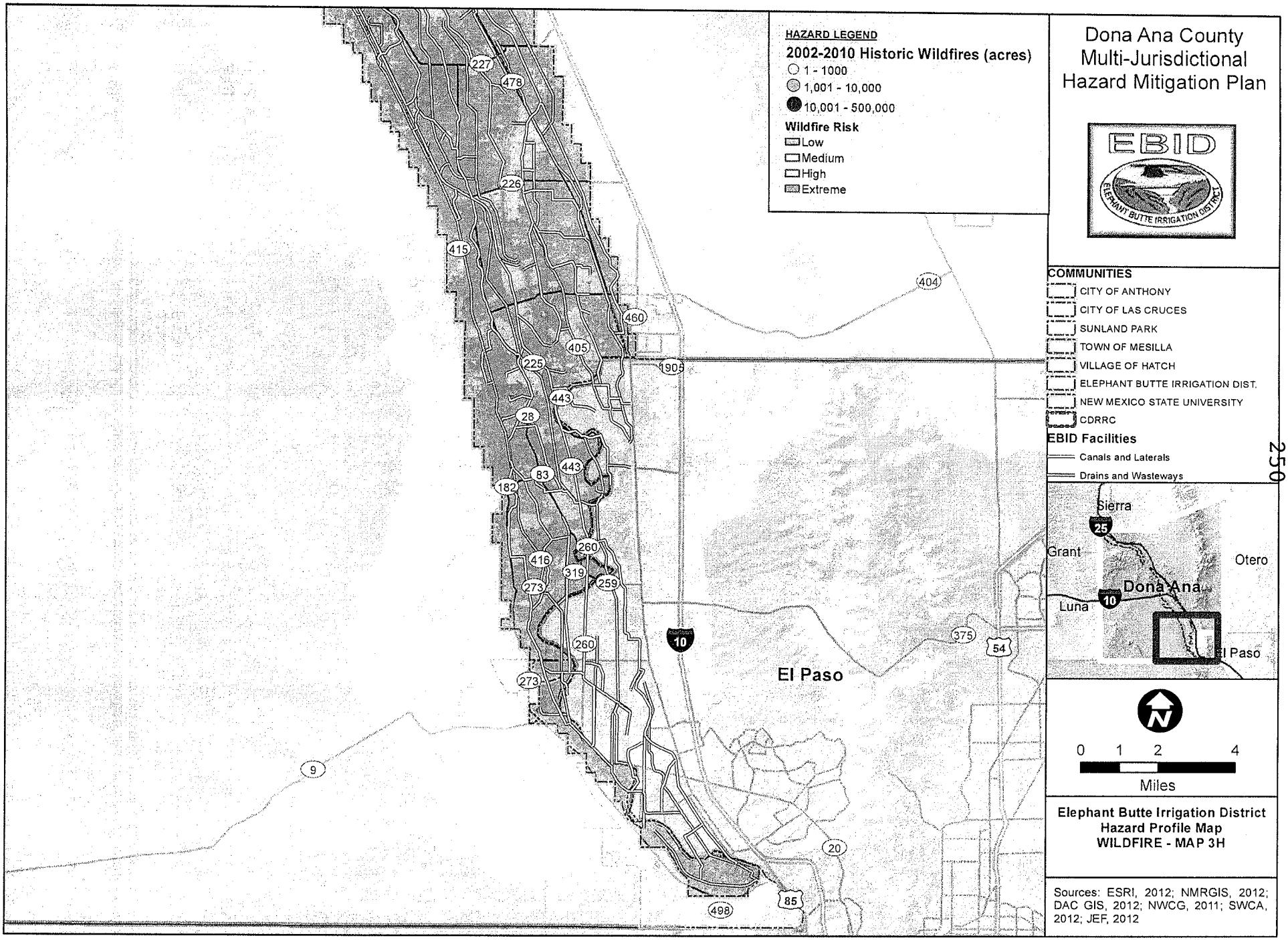
Feet

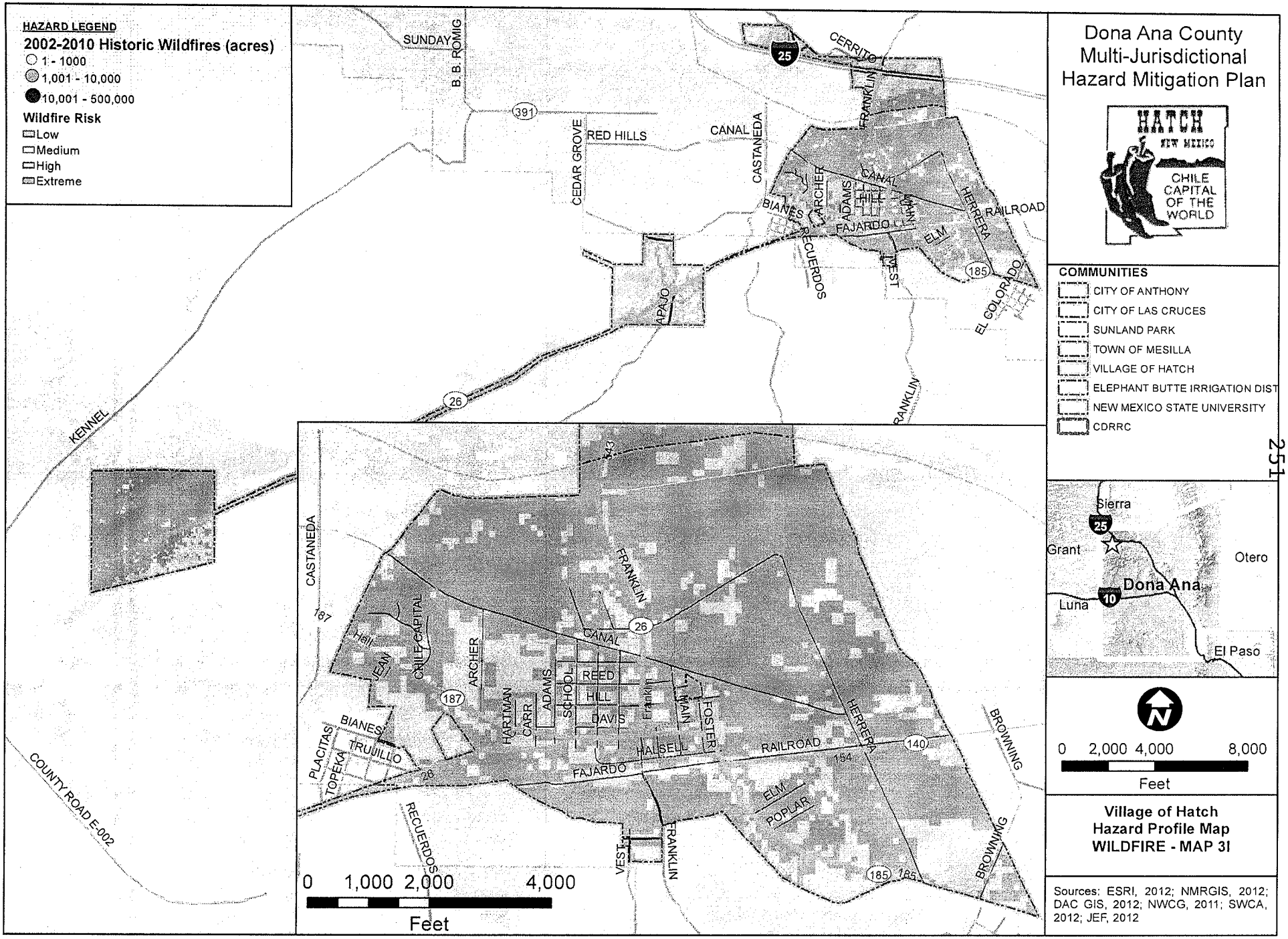
City of Anthony
Hazard Profile Map
WILDFIRE - MAP 3E

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


Sierra
Luna
RIVER
436
187
390
391
140
154
140
26
185
25
HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
EBID Facilities
Canals and Laterals
Drains and Wasteways
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
25
10
N
0 1 2 4
Miles
Elephant Butte Irrigation District
Hazard Profile Map
WILDFIRE - MAP 3F
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Dripping Springs
185
25
70
320
478
342
188
292
359
373
10
372
28
228
192
228
478
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
EBID Facilities
Canals and Laterals
Drains and Wasteways
Sierra
25
Grant
Otero
Dona Ana
Luna
10
El Paso
N
0 1 2 4
Miles
Elephant Butte Irrigation District
Hazard Profile Map
WILDFIRE - MAP 3G
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
EBID
ELEPHANT BUTTE IRRIGATION DISTRICT
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
EBID Facilities
Canals and Laterals
Drains and Wasteways
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
El Paso
0 1 2 4
Miles
Elephant Butte Irrigation District
Hazard Profile Map
WILDFIRE - MAP 3H
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012
227
478
226
415
404
460
405
225
1905
443
28
443
83
182
260
416
319
259
273
260
273
10
375
54
9
20
498
85



Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

HATCH NEW MEXICO
CHILE CAPITAL OF THE WORLD

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- ELEPHANT BUTTE IRRIGATION DIST
- NEW MEXICO STATE UNIVERSITY
- CDRRC

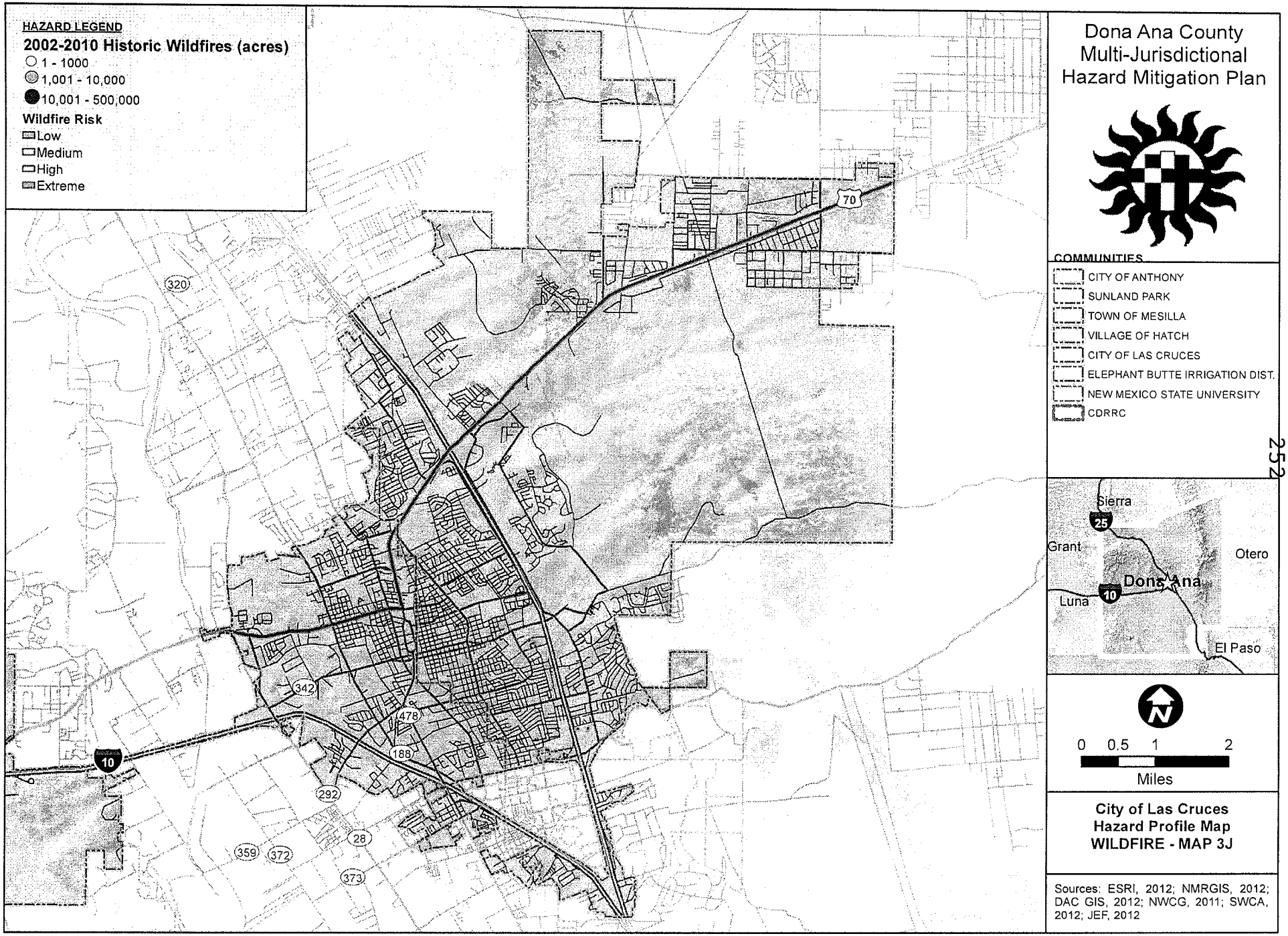
N

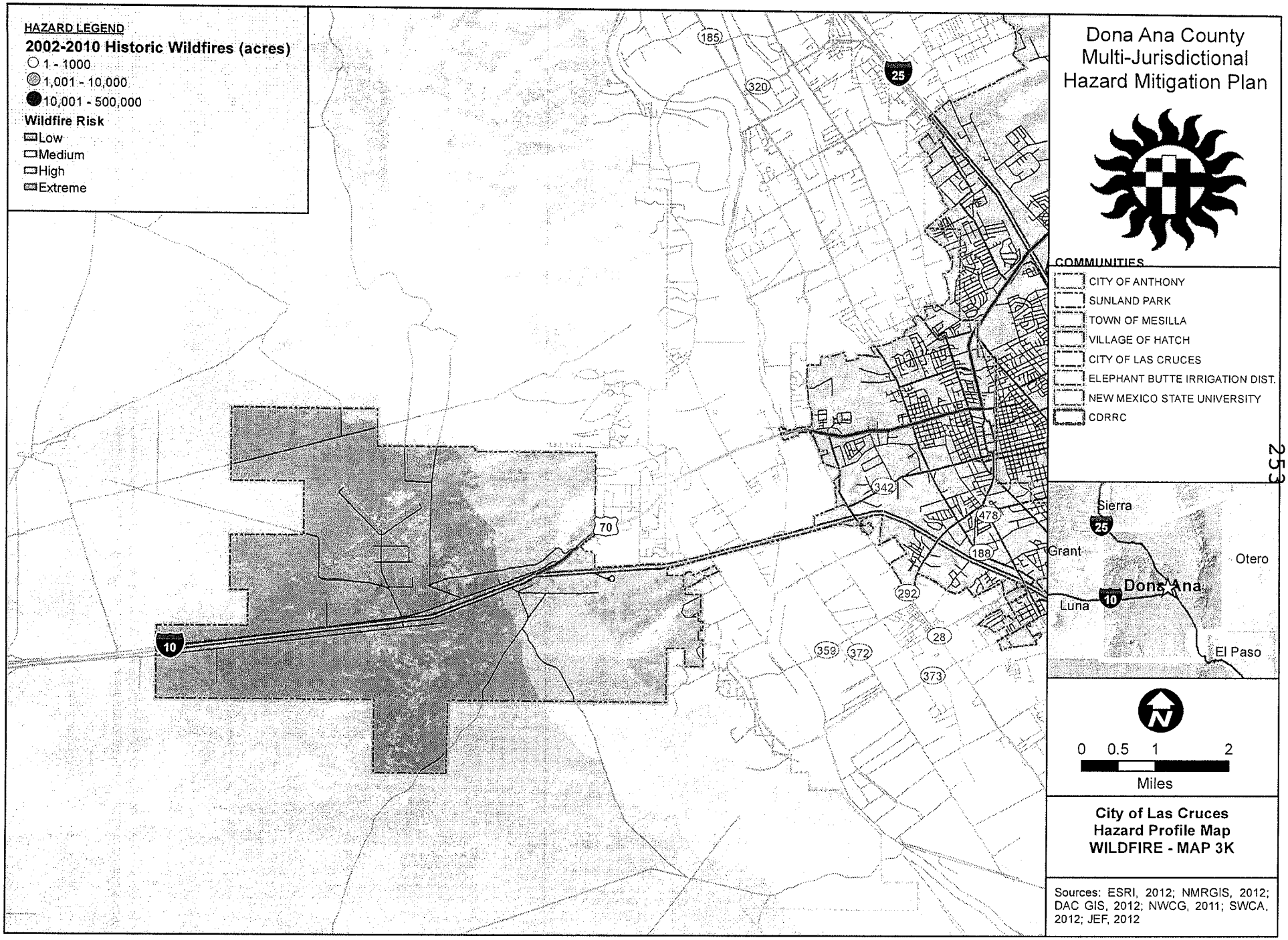
0 2,000 4,000 8,000

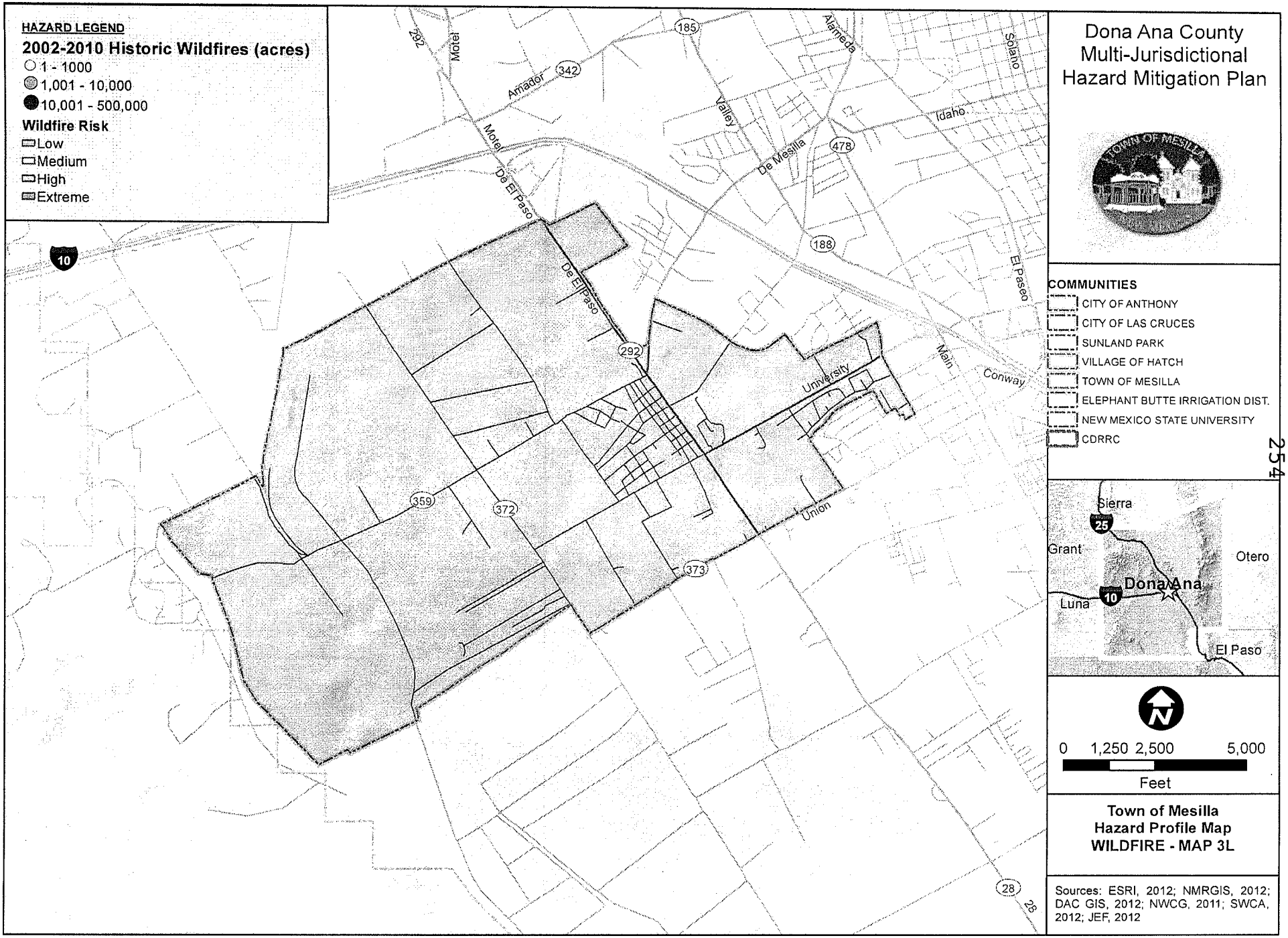
Feet

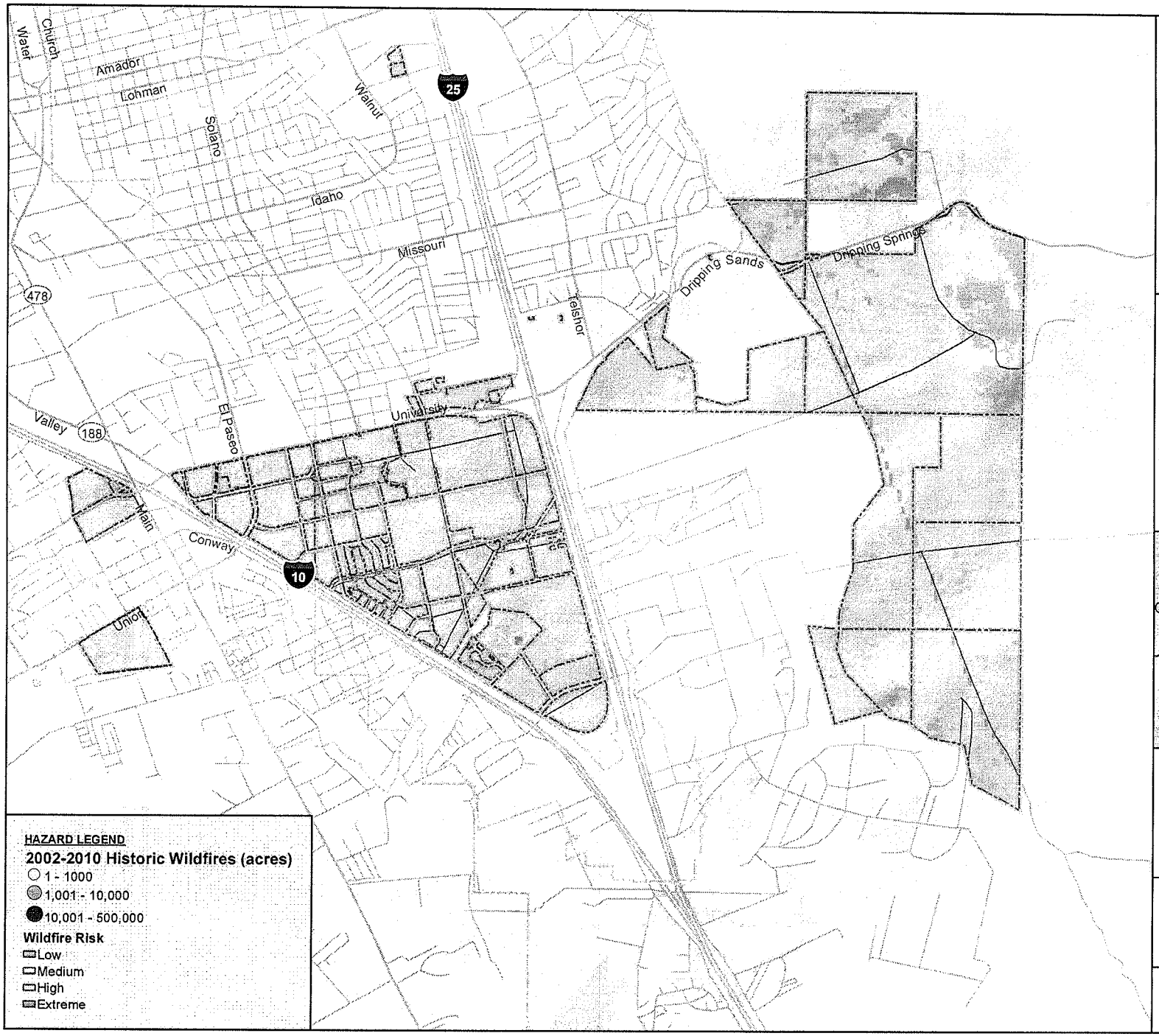
Village of Hatch
Hazard Profile Map
WILDFIRE - MAP 3I

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
CITY OF LAS CRUCES
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 0.5 1 2
Miles
City of Las Cruces
Hazard Profile Map
WILDFIRE - MAP 3J
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012
70
320
342
478
188
292
28
359
372
373
10
25


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
185
320
25
342
70
10
478
188
292
359
372
28
373
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
CITY OF LAS CRUCES
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 0.5 1 2
Miles
City of Las Cruces
Hazard Profile Map
WILDFIRE - MAP 3K
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
VILLAGE OF HATCH
TOWN OF MESILLA
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
CDRRC
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
0 1,250 2,500 5,000
Feet
Town of Mesilla
Hazard Profile Map
WILDFIRE - MAP 3L
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012
Motel
Amador
Valley
De Mesilla
Idaho
Alameda
Solano
De El Paso
Motel
El Paseo
Main
Conway
University
Union
10
185
342
292
478
188
359
372
373
28

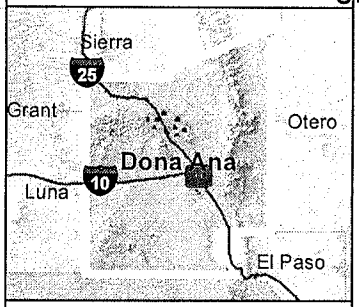


Dona Ana County Multi-Jurisdictional Hazard Mitigation Plan

NM STATE UNIVERSITY

COMMUNITIES

- CITY OF ANTHONY
- CITY OF LAS CRUCES
- SUNLAND PARK
- TOWN OF MESILLA
- VILLAGE OF HATCH
- NEW MEXICO STATE UNIVERSITY
- ELEPHANT BUTTE IRRIGATION DIST.
- CDRRC

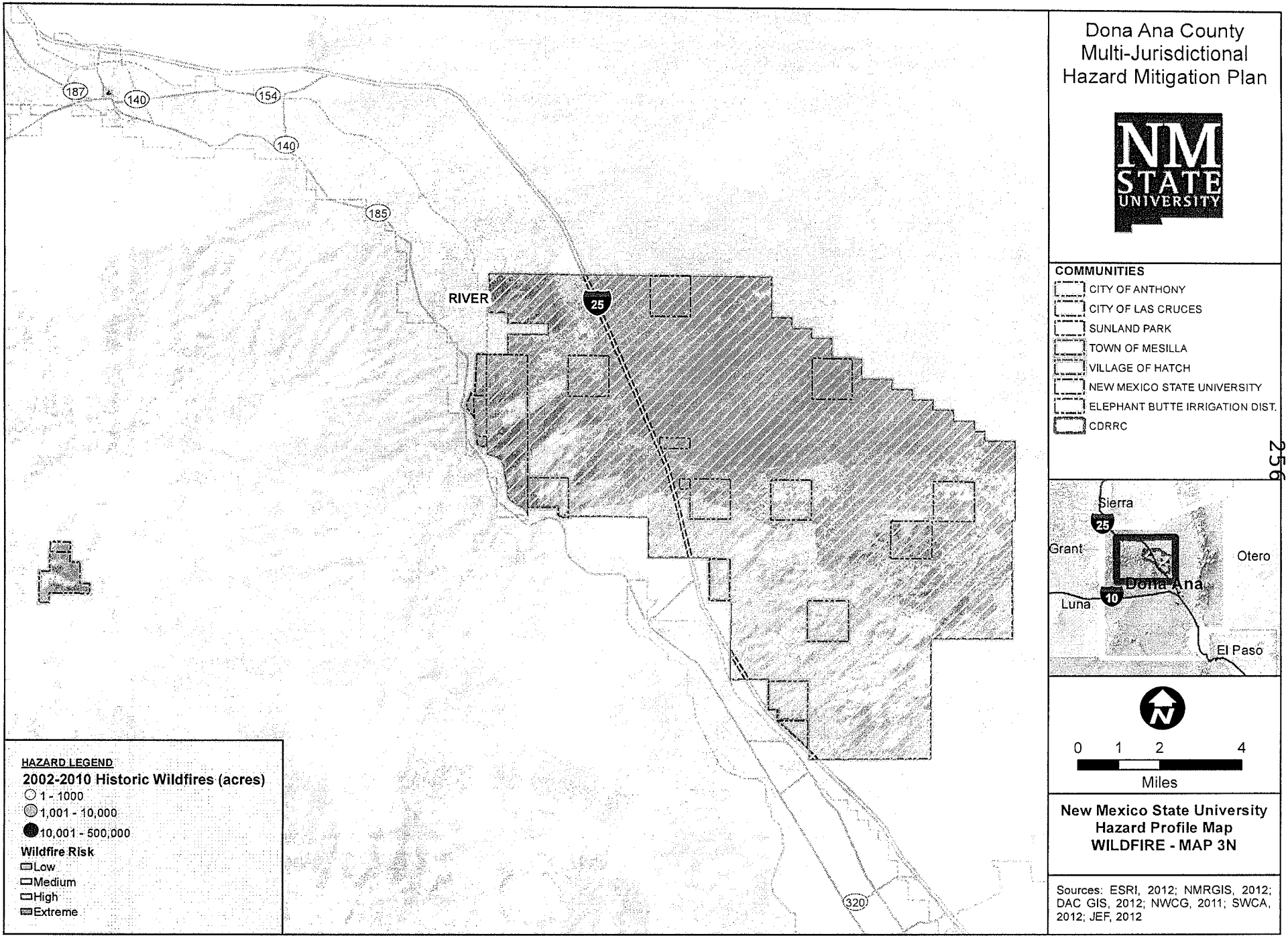


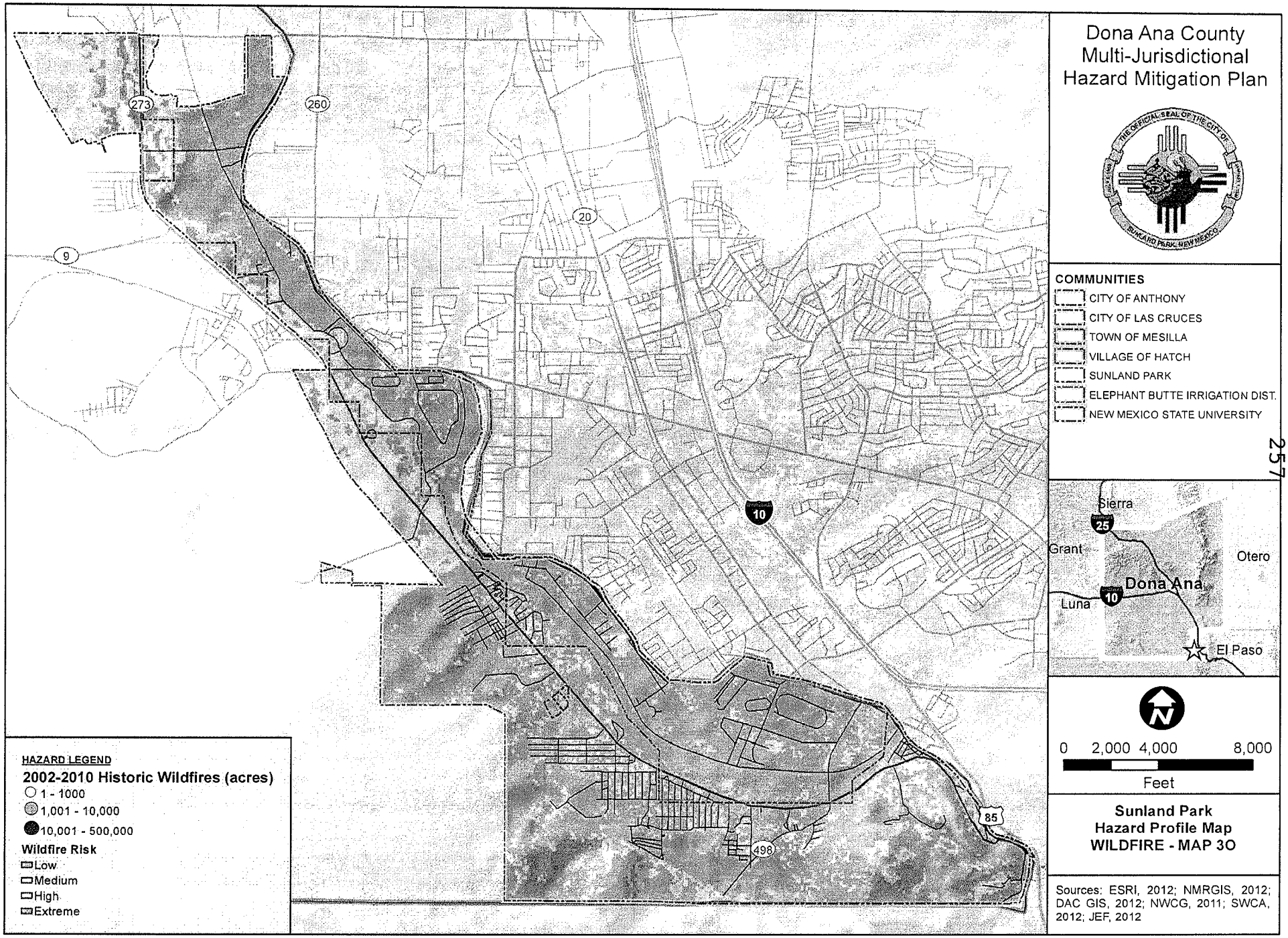
0 1,250 2,500 5,000

Feet

New Mexico State University Hazard Profile Map WILDFIRE - MAP 3M

Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
NM STATE UNIVERSITY
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
SUNLAND PARK
TOWN OF MESILLA
VILLAGE OF HATCH
NEW MEXICO STATE UNIVERSITY
ELEPHANT BUTTE IRRIGATION DIST.
CDRRC
RIVER
187
140
154
140
185
25
320
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
10
N
0 1 2 4
Miles
HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
New Mexico State University
Hazard Profile Map
WILDFIRE - MAP 3N
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012


Dona Ana County
Multi-Jurisdictional
Hazard Mitigation Plan
COMMUNITIES
CITY OF ANTHONY
CITY OF LAS CRUCES
TOWN OF MESILLA
VILLAGE OF HATCH
SUNLAND PARK
ELEPHANT BUTTE IRRIGATION DIST.
NEW MEXICO STATE UNIVERSITY
Sierra
Grant
Otero
Dona Ana
Luna
El Paso
HAZARD LEGEND
2002-2010 Historic Wildfires (acres)
1 - 1000
1,001 - 10,000
10,001 - 500,000
Wildfire Risk
Low
Medium
High
Extreme
0 2,000 4,000 8,000
Feet
Sunland Park
Hazard Profile Map
WILDFIRE - MAP 30
Sources: ESRI, 2012; NMRGIS, 2012; DAC GIS, 2012; NWCG, 2011; SWCA, 2012; JEF, 2012

SECTION 4: MITIGATION STRATEGY

The mitigation strategy provides the "what, when, and how" of actions that will reduce or possibly remove the community's exposure to hazard risks. According to DMA 2000, the primary components of the mitigation strategy are generally categorized into the following:

- **Capability Assessment**
- **Goals and Objectives**
- **Mitigation Actions/Projects and Implementation Strategy**

The entire 2004 Plan mitigation strategy was reviewed and updated by the Steering Committee, including a major re-organization of the mitigation strategy elements into this multi-jurisdictional plan format. Specifics of the changes and updates are discussed in the subsections below.

4.1 Capability Assessment

An important component of the Mitigation Strategy is a review of each participating jurisdiction's capabilities in order to identify, evaluate, and enhance the capacity of local resources to mitigate the effects of hazards. The capability assessment is comprised of several components:

- ✓ Legal and Regulatory Review – a review of the legal and regulatory capabilities, including ordinances, codes, plans, manuals, guidelines, and technical reports that address hazard mitigation activities.
- ✓ Technical Staff and Personnel – this assessment evaluated and describes the administrative and technical capacity of the jurisdiction's staff and personnel resources.
- ✓ Fiscal Capability – this element summarizes each jurisdiction's fiscal capability to provide the financial resources to implement the mitigation strategy.
- ✓ National Flood Insurance Program (NFIP) Participation – the NFIP contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments, but the program is promoted by FEMA as a basic first step for implementing and sustaining an effective flood hazard mitigation program, and is a key indicator for measuring local capability as part of this assessment.

The 2004 Plan did not perform a capability assessment and only a very brief overview of the participating jurisdiction's NFIP participation was mentioned. Accordingly, this section of the Plan does not reference back to the 2004 Plan.

4.1.1 Jurisdictional Capabilities

Tables 4-1-1 through 4-1-8 summarize the legal and regulatory mitigation capability for each participating jurisdiction. Information provided includes a brief listing of current codes, ordinances, plans, studies, and/or reports that are relevant to the jurisdictions capacity for mitigation. Tables 4-2-1 through 4-2-8 summarize the staff and personnel resources employed by each jurisdiction that serve as a resource for hazard mitigation. Tables 4-3-1 through 4-3-8 summarize the fiscal capability and budgetary tools available to each participating jurisdiction. Each of these three tables are listed below by jurisdiction.

Table 4-1-1: Legal and regulatory capabilities for Doña Ana County		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES	• 2006 International Residential Code • 2006 International Building Code • 2006 International Plumbing Code • 2006 International Mechanical Code • 2006 International Fuel Gas Code • 2008 National Electrical Code • Chapter 142 Building Code, Doña Ana County Code	• Community Development Building Services
	• 2003 International Fire Code	• Fire Marshal Office
ORDINANCES	• 1995 Doña Ana County Land Use Regulations and Zoning Ordinance • 1996 Doña Ana County Subdivision Regulations • 1989 Las Cruces Extra-territorial Zoning Ordinance	• Community Development
	• 2001 Erosion Control Ordinance	• Community Development • Codes
	• 2010 Doña Ana County Storm Water Management Ordinance	• County Engineering
	• 1995 Flood Damage Prevention Ordinance	• Doña Ana County Flood Commission Office
PLANS, MANUALS, and/or GUIDELINES	• 1994 Doña Ana County Comprehensive Plan • 2000 Las Cruces Extra-territorial Zoning Comprehensive Plan	• Community Development
	• 2008 Doña Ana County Development Design Standards	• Community Development • County Engineering
	• 2011 Doña Ana County/City of Las Cruces All-Hazard Emergency Operations Plan	• Office of Emergency Management
	• 2009 Doña Ana County Storm Water Management Program	• County Engineering
	• 2008 Chaparral Drainage Master Plan • 2009 Picacho Hills Drainage Master Plan • 2009 Old Picacho Drainage Master Plan • 1992 Jornada Master Drainage Plan	• Doña Ana County Flood Commission Office

Table 4-1-1: Legal and regulatory capabilities for Doña Ana County		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
STUDIES	• 1981 FEMA Flood Insurance Study Doña Ana County • 2004 Flood Studies of the Tellbrook and Fillmore Arroyos	• Doña Ana County Flood Commission Office

Table 4-2-1: Summary of technical staff and personnel capabilities for Doña Ana County		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	**Community Development Building Services**-Building Official and Development Technicians **Community Development Planning Division**-Planners **Engineering**-Licensed Engineers, Engineer Interns/Techs/Aides; (Design and Project Mgmt) **Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers **Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist **Assessor's Office**-County Assessor, Document Tech, Mapping, Appraisal Department **Facilities and Parks**-Manager, Maintenance Supervisor, Building Attendant Supervisor **Road Department**-Road Superintendent, Fleet Manager
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	**Community Development Building Services**-Building Official and Development Technicians **Engineering**-Licensed Engineers, Engineer Interns/Techs/Aides; (Design and Project Mgmt) **Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers **Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist **Assessor's Office**-County Assessor, Document Tech, Mapping, Appraisal Department **Facilities and Parks**-Manager, Maintenance Supervisor, Building Attendant Supervisor **Road Department**-Road Superintendent, Fleet Manager **Las Cruces/Doña Ana County Office of Emergency Management**-Emergency Management Personnel **Risk Management**-Risk Manager, Safety & Loss Coordinator

Table 4-2-1: Summary of technical staff and personnel capabilities for Doña Ana County		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	**Community Development Building Services**-Building Official and Development Technicians **Community Development Planning Division**-Planners **Engineering**-Licensed Engineers, Engineer Interns/Techs/Aides; (Design and Project Mgmt) **Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers **Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist **Assessor's Office**-County Assessor, Document Tech, Mapping, Appraisal Department **Risk Management**-Risk Manager, Safety & Loss Coordinator **Facilities and Parks**-Manager, Maintenance Supervisor, Building Attendant Supervisor **Road Department**-Road Superintendent, Fleet Manager **Las Cruces/Doña Ana County Office of Emergency Management**-Emergency Management Personnel
Floodplain Manager	☑	**Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers
Surveyors	☑	**Engineering**-Licensed Engineers, Licensed Surveyor; (Design and Project Mgmt)
Staff with education or expertise to assess the community's vulnerability to hazards	☑	**Las Cruces/Doña Ana County Office of Emergency Management**-Emergency Management Personnel **Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers **Risk Management**-Risk Manager, Safety & Loss Coordinator **Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist **Assessor's Office**-County Assessor, Document Tech, Mapping, Appraisal Department **Facilities and Parks**-Manager, Maintenance Supervisor, Building Attendant Supervisor **Road Department**-Road Superintendent, Fleet Manager **Community Development Planning Division**-Planners **Engineering**-Licensed Engineers, Engineer Interns/Techs/Aides; (Design and Project Mgmt)
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS	☑	**Community Development Planning Division**-Planners **Community Development GIS Division**- **Flood Commission Office**-Planner, Engineers, Certified Floodplain Managers **Engineering**-Licensed Engineers, Licensed Surveyor; (Design and Project Mgmt) **Assessor's Office**-County Assessor, Document Tech, Mapping, Appraisal Department
Scientists familiar with the hazards of the community	☑	**Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist
Emergency manager	☑	**Las Cruces/Doña Ana County Office of Emergency Management**-Emergency Management Personnel **Fire Marshal's Office**-Fire Marshal, Fire Prevention Specialist

Table 4-2-1: Summary of technical staff and personnel capabilities for Doña Ana County		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Grant writer(s)	☑	**Community Development Planning Division**-Planners **Purchasing Department**-Purchasing Manager, Contract Coordinator, Buyer **Health and Human Services**-Project Coordinators

Table 4-3-1: Fiscal capabilities for Doña Ana County		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	Apply for CDBG on an (as needed) annual basis: • Community Development Planning Division; • Health and Human Services; • Doña Ana County Housing Authority; • Engineering/Utilities
Capital Improvements Project funding	Yes	5-year CIP Program: • Community Development; • Flood Commission Office; • Engineering; • Fire Marshal's Office; • Airport; • Facilities and Parks; • Roads Department; • Utilities; • Health and Human Services; • Emergency Management; • Sheriff's Department; • Detention Center
Authority to levy taxes for specific purposes	Yes	Currently there is a tax mil-levy to operate the Flood Commission Office
Fees for water, sewer, gas, or electric service	Yes	There are fees for wastewater, water, and solid waste; Gas and electric are private.
Impact fees for homebuyers or new developments/homes	Yes	No Impact fees are used at this time.
Incur debt through general obligation bonds	No	
Incur debt through special tax bonds	No	

Table 4-1-2: Legal and regulatory capabilities for Anthony		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• IBC 2011 • City Code • Weed Abatement Ordinance (2010)	• City Council
PLANS, MANUALS, and/or GUIDELINES	• City of Anthony Comprehensive Plan (2010)	• City Council
STUDIES	• 1981 FEMA Flood Insurance Study Doña Ana County • Drainage Study by the USACOE (2011)	• FEMA • USACOE

Table 4-2-2: Summary of technical staff and personnel capabilities for Anthony		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices		***City of Anthony is newly incorporated and currently does not have formally defined departments at the writing of this plan***
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	Code Enforcer / Building Inspector
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	Acting Fire Chief
Floodplain Manager		
Surveyors		
Staff with education or expertise to assess the community's vulnerability to hazards		
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS		
Scientists familiar with the hazards of the community		
Emergency manager		
Grant writer(s)		

Table 4-3-2: Fiscal capabilities for Anthony		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	Currently working on grant
Capital Improvements Project funding	No	
Authority to levy taxes for specific purposes	Yes	None at this time
Fees for water, sewer, gas, or electric service	No	All privately served
Impact fees for homebuyers or new developments/homes	No	
Incur debt through general obligation bonds	No	
Incur debt through special tax bonds	No	

Table 4-1-3: Legal and regulatory capabilities for EBID		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• None	• N/A
PLANS, MANUALS, and/or GUIDELINES	• Drought Management Plan • Area Drainage Master Plan • Drainage Manual • Emergency Action Plan	• Engineering
STUDIES	• Dam Safety • Flood Control Dam EAP's	• Engineering • Maintenance

Table 4-2-3: Summary of technical staff and personnel capabilities for EBID		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	Engineering Department
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	Engineering Consultant Engineering Department
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	Engineering Consultant Engineering Department
Floodplain Manager	☑	Engineering Consultant Engineering Department
Surveyors	☑	Engineering Department
Staff with education or expertise to assess the community's vulnerability to hazards	☑	Maintenance Department Hydrology Department
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS	☑	Engineering Department CRGS Department
Scientists familiar with the hazards of the community	☑	Engineering Consultant Engineering Department
Emergency manager	☑	Manager/Treasurer Safety Director
Grant writer(s)	☑	Engineering Department CRGS Department
Others	☑	Hydrology Department

Table 4-3-3: Fiscal capabilities for EBID		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	No	
Capital Improvements Project funding	Yes	
Authority to levy taxes for specific purposes	Yes	Land improvement development
Fees for water, sewer, gas, or electric service	Yes	Permit fees for utility use of right-of-way
Impact fees for homebuyers or new developments/homes	No	
Incur debt through general obligation bonds	No	
Incur debt through special tax bonds	No	

Table 4-1-4: Legal and regulatory capabilities for Hatch		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• Floodplain Management Ordinance (Ord. 220 § 1A, 1988) • Other codes and ordinances can be viewed at: www.villageofhatch.org	• Village of Hatch
PLANS, MANUALS, and/or GUIDELINES	• Safety Water	• Public Works
STUDIES	• (None provided)	• N/A

Table 4-2-4: Summary of technical staff and personnel capabilities for Hatch		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices		
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure		
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards		
Floodplain Manager	☑	Doña Ana County Flood Commission Office
Surveyors		
Staff with education or expertise to assess the community's vulnerability to hazards	☑	Hatch PD Fire Chief Willie Herrera
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS		
Scientists familiar with the hazards of the community		
Emergency manager		
Grant writer(s)		

Table 4-3-4: Fiscal capabilities for Hatch		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	CDBG Requests made annually
Capital Improvements Project funding	Yes	Annual
Authority to levy taxes for specific purposes	Eligible	None Currently
Fees for water, sewer, gas, or electric service	Yes	Water/Sewer Only
Impact fees for homebuyers or new developments/homes	No	None
Incur debt through general obligation bonds	Eligible	None
Incur debt through special tax bonds	Eligible	None

Table 4-1-5: Legal and regulatory capabilities for Las Cruces		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• CLC Ordinance 1933; • CLC Municipal Code 34; • 44 CFR; • 2006 IBC;	• CLC Community Development; • CLC Public Works; Codes
PLANS, MANUALS, and/or GUIDELINES	• CLC Design Standards; • Municipal Code, • BCEGS; • CLC Master Drainage Plan;	• CLC Community Development; • CLC Public Works; Codes
STUDIES	• FIS (1995); • 1985 LC Comprehensive Plan;	• FEMA/CLC; • CLC Public Works; • CLC Community Development

Table 4-2-5: Summary of technical staff and personnel capabilities for Las Cruces		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	Community Development Public Works
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	Community Development Public Works
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	Community Development Public Works
Floodplain Manager	☑	Public Works – Floodplain Administrator
Surveyors	☑	Public Works – CLC Surveyor
Staff with education or expertise to assess the community's vulnerability to hazards	☑	LCFD; Doña Ana County - OEM
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS	☑	Information Technology - staff
Scientists familiar with the hazards of the community		
Emergency manager	☑	Doña Ana County - OEM
Grant writer(s)	☑	Financial Services – Grants Administration

Table 4-3-5: Fiscal capabilities for Las Cruces		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	Apply for CDBG on an annual basis
Capital Improvements Project funding	Yes	Five year CIP program
Authority to levy taxes for specific purposes	Yes	2Mil Levy Tax
Fees for water, sewer, gas, or electric service	Yes	For all customers
Impact fees for homebuyers or new developments/homes	Yes	Fees are updated as needed
Incur debt through general obligation bonds	No	N/A
Incur debt through special tax bonds	Yes	Revenue Bonds
Loans	Yes	NM Finance Authority

Table 4-1-6: Legal and regulatory capabilities for Mesilla		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES	• 2003 International Building Code • 2003 International Residential Code • 2003 International Fire Code • 2009 Mesilla Town Code • Title 14 New Mexico Administrative Code	• Community Development • Fire • Public Works • NM Regulation and Licensing Department-Construction Industries Division

ORDINANCES	• Mesilla Town Code Title 8 Health and Safety
	  • Open Burning
	• Mesilla Town Code Title 15 Buildings and Construction
	  • Flood Damage Prevention
	  • Manufactured Housing
	  • Building Code
	  • International Fire Code
	• Mesilla Town Code Title 17 Subdivisions
	  • Suitability of Land
	• Mesilla Town Code Title 18 Zoning
	• 1995 Doña Ana County Flood Damage Prevention Ordinance No. 161-9
		• Community Development
		• Fire
		• Planning, Zoning and Historical Appropriateness Commission
		• DAC Flood Commission

PLANS, MANUALS, and/or GUIDELINES	• Doña Ana County Storm Criteria Guidelines • Doña Ana County All Hazard Emergency Operations Plan • Doña Ana County Community Wildfire Protection Plan • 2004 Town Of Mesilla Comprehensive Plan	• DAC/CLC Office of Emergency Management • Community Development • Public Works • Fire • DAC Flood Commission
STUDIES	• FEMA DFIRM Maps (Effective date of April, 2007)	• FEMA

Table 4-2-6: Summary of technical staff and personnel capabilities for Mesilla		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	Public Works – Contract with Planning and Development Company
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	Community Development – Building Inspector
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards		
Floodplain Manager		
Surveyors		
Staff with education or expertise to assess the community's vulnerability to hazards	☑	Fire – Fire Chief
Personnel skilled in GIS and/or HAZUS		
Scientists familiar with the hazards of the community		
Emergency manager		
Grant writer(s)	☑	Public Works – Director Fire – Fire Chief

Table 4-3-6: Fiscal capabilities for Mesilla		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	Apply for CDBG annually
Capital Improvements Project funding	Yes	Apply for State funding annually and Federal Grants when available
Authority to levy taxes for specific purposes	Yes	Currently none in place
Fees for water, sewer, gas, or electric service	Yes	Fees for water system
Impact fees for homebuyers or new developments/homes	No	No ordinance in place
Incur debt through general obligation bonds	Yes	Only attempt in March, 2012 defeated
Incur debt through special tax bonds	Yes	None currently in place

Table 4-1-7: Legal and regulatory capabilities for NMSU		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• 2009 NM Commercial Building Code • 2009 NM Residential Code • 2009 NM Existing Building Code • NM Plumbing Code • NM Mechanical Code • 2011 NM Electric Code • 2007 NM Electrical Safety Code • 2003 ICC International Fire Code for new construction • NFPA Fire Prevention Code –1 and the 1997 Life Safety Code – 101 or whatever code is currently adopted by the State of New Mexico	• Facilities & Services (FS) Project Development and Engineering • FS University Architect • FS Operations • FS Dept of Fire & Emergency Services • NMSU Board of Regents
POLICIES	• NMSU Policy Chapter 9: Facilities & Services • NM HED Web http://www.hed.state.nm.us/ • NM State Board Finance Statutes • NMSU Policy 2.25 Emergency Preparedness • NMSU Policy 2.35.1.1.8 Emergency Notification • NMSU Policy 2.30 Fire Safety, Prevention & Emergency Services • NMSU Policy 2.53 Police (University)	• FS Project Development and Engineering • FS University Architect • FS Environmental Health & Safety • NMSU Planning & Institution Technology • FS Dept of Fire & Emergency Services • NMSU Police Department

Table 4-1-7: Legal and regulatory capabilities for NMSU		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
PLANS, MANUALS, and/or GUIDELINES	• NMSU Master Plan • NMSU Utility Master Plan • NMSU Parking & Transportation Master Plan (currently in draft) • NMSU Housing Master Plan • NMSU All Hazards Emergency Operations Plan • NMSU Departmental Continuity of Operations Plans • NMSU Departmental Emergency Action Plans • NMSU IT Disaster Recovery Plan • NMSU Fire Prevention Guidelines & Practices • University Avenue Corridor Overlay District • City of Las Cruces Development • NMSU participation on CLC Metropolitan Planning Organization	• FS University Architect • Facilities & Services (FS) Project Development and Engineering • NMSU Auxiliary Administration • FS Operations • FS Dept of Fire & Emergency Services • NMSU Police Department • FS Environmental Health & Safety • NMSU Planning & Institution Technology
STUDIES	• AON Risk Loss Prevention Analysis • DHS US Homeland Security evaluation • NMSU Stormwater Management Program • Utility Master Plan • Water Master Plan • Annual Fire Safety Report (Clery Act) • Annual Safety report (Clery Act)	• NMSU Purchasing and Risk Mgmt Admin • NMSU Police Department • FS Engineering • FS Dept of Fire & Emergency Services

Table 4-2-7: Summary of technical staff and personnel capabilities for NMSU		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	**Facilities and Services** (FS)- Asst VP for Facilities **FS Architect**- University Architect, **FS Engineering**- Facilities Engineer
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	**Facilities and Services** - Asst VP for Facilities **FS Project Construction**- Project Mgr Inspection **FS Project Design** – Project Mgr Design **FS Engineering**- Facilities Engineer
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	**Facilities and Services** - Asst VP for Facilities **FS Environmental Health & Safety** - Director, Asst Director **FS Engineering**- Facilities Engineer **FS University Architect** **FS Project Design** - Project Mgr Design **Purchasing and Risk Mgmt Admin** – Dir Procurement Svcs/Risk Mgt
Floodplain Manager	☑	**FS Engineering**- Facilities Engineer
Civil Engineering	☑	**FS Engineering**- Facilities Engineer
Staff with education or expertise to assess the community's vulnerability to hazards	☑	**Facilities and Services** - Asst VP for Facilities **NMSU Police Dept**. - Deputy Chief **FS Dept of Fire & Emerg. Services** – Fire Chief, Fire Protection Shift Captain **FS Environmental Health & Safety** - Director & Assistant Director **Student Health Center** - Exec Dir, Health & Wellness
Personnel skilled in GIS and or HAZUS	☑	**Geography** – GIS Analyst **NMSU Police Dept**. - Deputy Chief

Table 4-2-7: Summary of technical staff and personnel capabilities for NMSU		
Staff/Personnel Resources	☑	**Department/Agency - Position**
NMSU Experts: academic personnel with relevant expertise in a specific area or field of study NMSU web search for experts updated annually	☑	Robert J. Czerniak - Professor, land use and urban development Michael N. DeMers – Professor, Geographic Information Systems (GIS) Sonya Leigh Cooper - Assc Dean, Eng, Construction Engineering/ Structural Engineering Kenneth R. White - Acad Dept Head, Structural Engineering James P. King – Associate Professor, Civil Engineering James R. Murphy - Associate Professor, Weather David DuBois – Professor ACES/PES, State Climatologist Brian H. Hurd - Assistant Professor, vulnerability and adaptation to climate change Susan L. Wilson - Associate Professor, Public Health Preparedness and Response J. Tim Query - Assistant Professor, Risk Management Al Berryman - Assistant Professor, Insurance Max P. Bleiweiss - Ag Research Scientist, Weather forecasting Christopher P. Brown – GIS and regional water resources Sam Fernald, Interim Dept Head of WRRI, water expertise
Emergency manager (Police, Fire, EH&S, UHC, FS)	☑	**Facilities and Services** - Asst VP for Facilities **NMSU Police** – Police Chief, All Supervisors **FS Dept of Fire & Emerg. Services** – Fire Chief, Fire Protection Shift Captain **FS Environmental Health & Safety** - Director, Assistant Director **Student Health Center** - Exec Dir, Health & Wellness
Grant writer(s)	☑	**Grants and Contracts Office** – Dir, Grants & Contracts **College Research Centers:** Agriculture and Home Econ College Arts and Sciences College Business College Education College Engineering College Health and Social Services College
FEMA rated communications leaders Public Information Officers	☑	**NMSU Emergency Dispatch Center** – Dispatchers **NMSU Police Department** - Multiple Designated PIOs **News and Media Relations** - Director, News & Media Relations **University Communications** - Assc VP, Univ Comm/Mkting Svcs
Telecommunication	☑	**ICT Telecomm and Networking Svcs** – Deputy CIO/Telecomm Dir

Table 4-2-7: Summary of technical staff and personnel capabilities for NMSU		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Water Electrical	☑	**FS Plumbing** – Supv, Skilled Crafts **FS Electricians** – Supv, Skilled Crafts
Housing Food Service	☑	**Housing and Residential Life** - Director, Housing & Res Life **Auxiliary Administration** - Asst VP, Auxiliary Svcs

Table 4-3-7: Fiscal capabilities for NMSU		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Eligible	Apply for CDBG on an annual basis
Capital Improvements Project funding	Yes	Through State of NM and subject to legislature appropriation
Authority to levy taxes for specific purposes	Yes	Community Colleges
Fees for water, sewer, gas, or electric service	Yes	Fees to cover utility expense applied to facilities that are operated as revenue centers and are not instruction or general service.
Impact fees for homebuyers or new developments/homes	No	
Incur debt through general obligation bonds	Yes	
Incur debt through special tax bonds	Yes	DACC has the ability to seek voter approval
Other	Yes	State of NM annually funds NMSU for operation, repair and maintenance of a portion of campus

Table 4-1-8: Legal and regulatory capabilities for Sunland Park		
Regulatory Tools for Hazard Mitigation	**Description**	**Responsible Department/Agency**
CODES and/or ORDINANCES	• International Building Codes • Flood Damage Prevention Ordinance • ICC Codes	• Community Development Dept.
PLANS, MANUALS, and/or GUIDELINES	• City Ordinance	• Community Development Dept.
STUDIES	• Flood Insurance Study (FIS)	• Community Development Dept.

Table 4-2-8: Summary of technical staff and personnel capabilities for Sunland Park		
Staff/Personnel Resources	☑	**Department/Agency - Position**
Planner(s) or engineer(s) with knowledge of land development and land management practices	☑	Community Development - Director
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	☑	Community Development - Building Inspector / CFM
Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards	☑	Community Development - Building Inspector / CFM
Floodplain Manager	☑	Community Development - Building Inspector / CFM
Surveyors		
Staff with education or expertise to assess the community's vulnerability to hazards	☑	Community Development - Building Inspector / CFM
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS	☑	Community Development - Building Inspector / CFM
Scientists familiar with the hazards of the community		
Emergency manager	☑	Fire Chief
Grant writer(s)	☑	Community Development – Grant Writer

Table 4-3-8: Fiscal capabilities for Sunland Park		
Financial Resources	**Accessible or Eligible to Use (Yes, No, Don't Know)**	**Comments**
Community Development Block Grants	Yes	As needed
Capital Improvements Project funding	Yes	5 year project cycles
Authority to levy taxes for specific purposes	No	
Fees for water, sewer, gas, or electric service	No	Water/Wastewater Authority
Impact fees for homebuyers or new developments/homes	No	
Incur debt through general obligation bonds	No	
Incur debt through special tax bonds	No	

4.1.2 National Flood Insurance Program Participation

Participation in the NFIP is a key element of any community's local floodplain management and flood mitigation strategy. Doña Ana County and the incorporated jurisdictions of Hatch, Las Cruces, Mesilla, and Sunland Park currently participate in the NFIP. Anthony anticipates joining the NFIP at some point in the future. Although NMSU and EBID are not separately listed as participating jurisdictions in the NFIP, floodplain management within NMSU and EBID boundaries is covered by the county or incorporated community within which the subject property is located, as appropriate. NMSU also practices sound floodplain management through oversight and enforcement of regulations and ordinances by the Construction Industries Division of the New Mexico Regulation and Licensing Department. Both NMSU and EBID cooperate with the floodplain management objectives of Doña Ana County and the other NFIP communities to work towards a common goal of maintaining NFIP compliance.

Joining the NFIP requires the adoption of a floodplain management ordinance that requires jurisdictions to follow established minimum standards set forth by FEMA and the State of New Mexico, when developing in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by the 100-year flood, and that new floodplain development will not aggravate existing flood problems or increase damage to neighboring properties. As a participant in the NFIP, communities benefit from having Flood Insurance Rate Maps (FIRM) that map identified flood hazard areas and can be used to assess flood hazard risk, regulate construction practices and set flood insurance rates. FIRMs are also an important source of information to educate residents, government officials and the private sector about the likelihood of flooding in their community. Table 4-4 summarizes the NFIP status and statistics for each of the jurisdictions participating in this Plan.

Table 4-4: NFIP status and statistics for Doña Ana County and participating jurisdictions as of March 2012						
Jurisdiction	**Community ID**	**NFIP Entry Date**	**Current Effective Map Date**	**Number of Policies**	**Amount of Coverage (x $1,000)**	**Floodplain Management Role**
Doña Ana County	350012	09/27/1991	09/06/1995	611	$156,779	Floodplain management provided by DAC Flood Commission for all unincorporated areas of the county, the Village of Hatch, and the Town of Mesilla.
City of Anthony	350061	Not currently a participate in the NFIP Program, but looking into it.				
Village of Hatch	350013	01/03/1986	09/27/1991	81	$11,741	Floodplain management provided by DAC Flood Commission.
City of Las Cruces	355332	06/11/1971	09/06/1995	965	$190,503	Floodplain management provided by the city for all incorporated areas of Las Cruces, through the Engineering Services Section of the Public Works Department.
Town of Mesilla	350113	05/28/1985	9/27/1991	20	$6,118	Floodplain management provided by DAC Flood Commission.
City of Sunland Park	350147	11/08/2006	09/03/1992	10	$2,820	Floodplain management provided by the city for all incorporated areas of Sunland Park, through the Community Development Department.
Elephant Butte Irrigation District	Not a participate in the NFIP Program. Floodplain management within EBID boundaries is covered by the county or incorporated community, as appropriate.					
New Mexico State University	Not a participate in the NFIP Program. Floodplain management within NMSU boundaries is covered by the county or incorporated community, as appropriate, with oversight provided by the Construction Industries Division of the New Mexico Regulation and Licensing Department.					
Sources: Policy Statistics - http://bsa.nfipstat.com/reports/1011.htm (12/31/2011); NFIP Status - http://bsa.nfipstat.com/comm_status/index.html (3/8/2012)						

Each of the incorporated jurisdictions currently participating in the NFIP program performed an overall assessment of their NFIP program by responding to the following questions:

Question 1: Describe your jurisdiction's current floodplain management / regulation process for construction of new or substantially improved development within your jurisdiction.

Question 2: Describe the status and/or validity of the current floodplain hazard mapping for your jurisdiction.

Question 3: Describe any community assistance activities (e.g. – help with obtaining Elevation Certificates, flood hazard identification assistance, flood insurance acquisition guidance, public involvement activities, etc.)

Question 4: Describe identified needs in your floodplain management program. This could include things like updating the floodplain management code/regulation, establishing written review procedures, modifying or adding flood hazard area mapping, etc.

Table 4-5 summarizes the responses provided by each of the currently participating jurisdictions

Table 4-5: NFIP program assessment for Doña Ana County and participating NFIP jurisdictions		
Participating Jurisdiction	**Responses to Questions 1-4**	
Doña Ana County	Q1	The Doña Ana County Flood Commission Office reviews all building permits and land development applications (i.e., residential and commercial permits, mobile home installation permits, subdivision applications, land use applications, etc.) and validate if the permit/application is within a FEMA Special Flood Hazard Area (SFHA). We also reference and use our best available data (i.e., aerial photography (ArcView GIS), drainage studies, subdivision construction drawings, codes and development regulations, etc.) as part of that review. We maintain our review information on a log-database that is used at the end of the year for reporting activity to the BOCC and related Boards. When applicable, we require an Elevation Certificate be utilized when a structure is proposed within a FEMA SFHA or advise there may be a need for Letter of Map Change (LOMC). We also oversee the floodplain management process/program either through a MOU or JPA for the Village of Hatch and Town of Mesilla. We have a Flood Damage Prevention Ordinance that we utilized for reviews/development/floodplain management. Our staff involved with reviews/development/floodplain management are CFMs.
	Q2	We are currently going through the DFIRM process for updating our Flood Insurance Rate Maps and FIS. We are working with the International Boundary and Water Commission (IBWC), FEMA, and the local governmental agencies for completing this project. We are also involved in the Cooperating Technical Partner (CTP) program and our community has processed several applications prior to the DFIRM process.
	Q3	We are in the Community Rating System (CRS) Program and are a Class 8. The CRS Program has several outreach

Table 4-5: NFIP program assessment for Doña Ana County and participating NFIP jurisdictions		
Participating Jurisdiction	**Responses to Questions 1-4**	
		strategies and action items that we currently do to maintain our CRS Program. We have had several CAVs from the State Floodplain Coordinator, ISO, and FEMA Region 6 Reps. Through the CRS Program as well as the NM Floodplain Managers Association, we have attended fairs and related functions for outreach. We also oversee the floodplain management process/program either through a MOU or JPA for the Village of Hatch and Town of Mesilla.
	Q4	We are always seeking to gain better knowledge and assistance with training specifically coming to our community. We are in close contact with reps from FEMA Region 6 to do this. If there is a need for improving our program, it would be going to the State Legislature and educating them more on floodplain management and the need for State support for projects, funding, outreach, natural hazards, etc. (which should be across the State).
Village of Hatch	Q1	Doña Ana County currently oversees building permit process for the Village of Hatch. Doña Ana County Flood Commission Office administers Flood Plan management for the Village of Hatch.
	Q2	DFIRMs are being updated.
	Q3	Doña Ana County Flood Commission Office provides this service for the Village of Hatch.
	Q4	Additional training from FEMA/State; updating flood damage performance ordinance; better flood mapping; drainage control structures, dams, dyke's, etc.
City of Las Cruces	Q1	All properties/parcels located within the City of Las Cruces limits have been loaded into a MUNIS software program. All properties/parcels located in the SFHA have been identified and are flagged as "Flood Zone – YES". If a permit request is made for a property or parcel that has been identified to be located in the SFHA – the permit technician contacts the Floodplain Administrator to see if the request should be permitted. The Floodplain Administrator will review the request and inform the requester of compliance issues.
	Q2	The City of Las Cruces is using the Flood Insurance Rate Maps from the 1995 Study. The City of Las Cruces has been waiting for the proposed DFIRMs to become effective, however because of litigation

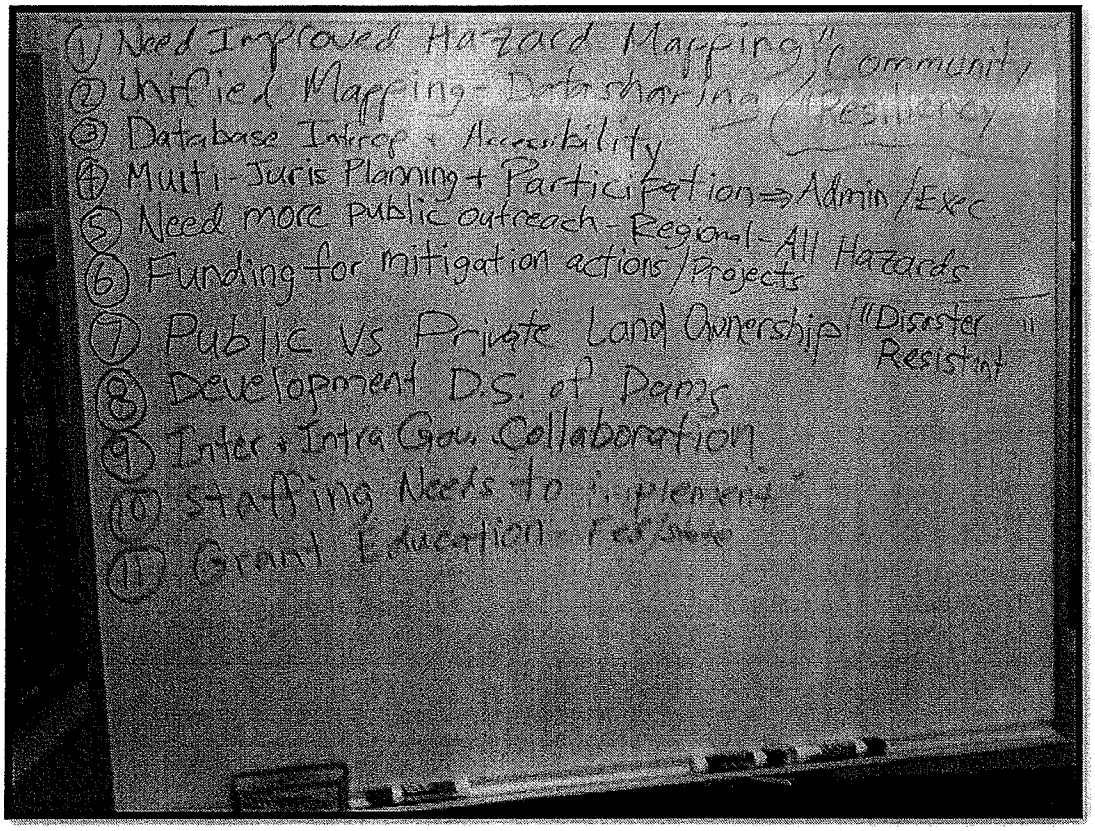
Table 4-5: NFIP program assessment for Doña Ana County and participating NFIP jurisdictions		
Participating Jurisdiction	**Responses to Questions 1-4**	
		from some County residences – the maps are still on hold. The City of Las Cruces has hired a local Engineering Firm to re-study portions of the City, in an effort to create maps that are more precise.
	Q3	The City of Las Cruces is a CRS – Class 6 and conducts many of the activities in the NFIP-CRS.
	Q4	The City of Las Cruces needs to get our DFIRMs.
Town of Mesilla	Q1	DAC County Flood Commission office does this work for the Town of Mesilla. All construction projects are permitted through the Town of Mesilla Community Development Director and must contain engineer stamped plans for site design, runoff compliance and applicable Town Codes.
	Q2	Current DFIRMS are pending updates and approvals from federal agencies. Utilizing current FIRMs and relevant data until the DFIRMS are approved.
	Q3	DAC County Flood Commission office does this work for the Town of Mesilla. All construction projects are permitted through the Town of Mesilla Community Development Director and must contain engineer stamped plans for site design, runoff compliance and applicable Town Codes.
	Q4	More FEMA training in floodplain management and Town of Mesilla staff education. Grant Funding training is desirable. Flood hazard area mapping, etc. will be reviewed pending federal approval of DFIRMS.
City of Sunland Park	Q1	Sunland Park has adopted an ordinance addressing issues of flooding requiring all developers to comply with flood regulations; fines are imposed for non-compliance.
	Q2	DFIRM's are currently being updated and are pending approval by FEMA.
	Q3	Flood plain manager of Sunland Park assists with all building permits that includes; Elevation Certificates, flood hazard identification assistance, flood zone determination, drainage projects, etc.
	Q4	Currently waiting for DFIRM's to be updated and adopted.

4.2 Hazard Mitigation Goals

An assessment of the mitigation goals summarized in the 2004 Plan was performed by the Steering Committee during the fourth planning meeting. To aid with the assessment, the goals listed in the 2010 State Plan (NMDHSEM, 2010) were made available, as well as crosswalk comments provided by a courtesy FEMA Region 6 review of the 2004 Plan. The comments provided by FEMA concluded that the stated "goals" listed in the 2004 Plan were really not goals and would be better described as actions. FEMA strongly recommended that the mitigation goal section be revisited to formulate true mitigation goals that are broader in scope and more long-term. The Steering Committee reviewed and discussed the 2004 Plan mitigation goals section and came to a consensus that the whole section needed revising.

Following a review of the vulnerability analysis results, the Steering Committee developed a new list of mitigation goals using the following process:

- Using the results of the risk assessment and personal experience of hazards impacting the County, the Steering Committee brainstormed problem statements regarding challenges, needs, and known issues relating to natural hazards and their mitigation.
- The problem statements were listed on a white board and discussed to determine similarities and potential topic categories.
- Goal statements were then formulated to address the various group topics.



The final list of mitigation goals developed by the Steering Committee are listed below in no particular order of importance.

Goal 1 – Improve hazard mitigation communication and collaboration with federal, state, local, and other governmental agencies, and private sector organizations and stakeholders.

Goal 2 – Promote disaster-resistant future development.

Goal 3 – Promote public understanding, support, and demand for hazard mitigation.

Goal 4 – Reduce or eliminate the risk to people and property from natural hazards by developing community resiliency.

Goal 5 – Explore all internal and external avenues to fund mitigation activities.

4.3 Mitigation Actions/Projects

Mitigation actions/projects (A/P) are those activities identified by a jurisdiction, that when implemented, will have the effect of reducing the community's exposure and risk to the particular hazard or hazards being mitigated. The implementation strategy addresses the *"how, when, and by whom?"* questions related to implementing an identified A/P.

The process for defining the list of mitigation A/Ps for the Plan was accomplished in three steps. First, an assessment of the actions and projects specified in the 2004 Plan was performed, wherein each jurisdiction reviewed and evaluated their jurisdiction specific list. Second, a new list of A/Ps for the Plan was developed by combining the 2004 Plan A/Ps that will be carried forward as a result of the assessment, and any new A/Ps. Third, an implementation strategy for the combined list of A/Ps was formulated. Details of each step and the results of the process are summarized in the following sections.

4.3.1 Previous Mitigation Actions/Projects Assessment

The Steering Committee and Local Planning Team for each jurisdiction, reviewed and assessed the 2004 Plan actions and projects. The assessment included evaluating and classifying each of the previously identified A/Ps based on the following criteria:

STATUS		***DISPOSITION***	
Classification	Explanation Requirement:	Classification	Explanation Requirement:
"No Action"	Reason for no progress	***"Keep"***	None required
"In Progress"	What progress has been made	***"Revise"***	Revised components
"Complete"	Date of completion and final cost of project (if applicable)	***"Delete"***	Reason(s) for exclusion.

Any A/P with a disposition classification of "Keep" or "Revise" was carried forward to become part of the new A/P list for the Plan. All A/Ps identified for deletion were removed and are not included in this Plan. The results of the assessment for each of the 2004 Plan A/Ps is summarized by jurisdiction in Tables 4-6-1 through 4-6-5. It is noted that no tables are provided for Anthony, EBID or NMSU as these jurisdictions were not adopting participants in the 2004 Plan and do not have any A/Ps to assess.

Table 4-6-1
Assessment of mitigation actions/projects identified by Doña Ana County in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
1. Doña Ana County Action Item: Update Doña Ana County FIRMs to a Digital (DFIRM) Mapping Format (pp 63-64)	• DAC Flood Commission • $2 million • FY 2005	In Progress	Keep	Project is ongoing. We are working with local governmental agencies, FEMA and IBWC for resolution.
Action Item #1: Upgrade Flood Protection Capabilities of the Rio Grande Canalization Project. (pp 66-67)	• DAC Flood Commission plus other agencies • None Provided • None Provided	In Progress	Revise	This project is tied to the DFIRMs. We are working with local governmental agencies, FEMA and IBWC for resolution.
Action Item #2: Evaluate and adopt Building Codes. (pp 67-68)	• DAC Flood Commission and Building Official • Staff Time • None Provided	Complete	Delete	DAC has converted to the IBC. Codes have been updated to 2007 series of international codes.
Action Item #3: Reduce Flood Risks throughout Doña Ana County. (p 68)	• DAC Flood Commission, DAC Planning Dept. • $11 million + Staff Time • None Provided	In Progress	Revise	Drainage projects are ongoing. Funding is still being allocated and projects are being completed. More recently drainage projects are on DAC's Capital Improvement Plan (CIPs), Infrastructure and Capital Improvement Plan (ICIPs) and Colonias Trust funding. Revisions – currently the action/project is too broad and is more of a goal than an action. DAC will identify more specific actions/projects that are measurable with defined timelines.
Action Item #4: Wildfire – Public Awareness and Education. (p 68-69)	• DAC Office of EM • Staff Time • None Provided	Complete	Delete	Covered under the Community Wildfire Protection Plan (CWPP)

Table 4-6-1
Assessment of mitigation actions/projects identified by Doña Ana County in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
Action Item #5: Adoption of Drought or Water Conservation Plans. (p 69)	• DAC Office of EM • $20,000 or Staff Time • None Provided	Complete	Delete	The City of Las Cruces has developed and adopted a Drought/Water Conservation Plan. Doña Ana County has no Government owned water utilities, therefore no plan was developed for DAC.
Action Item #6: Hazardous Cargo Routing Study, Designation of A Hazardous Cargo Route and Hazardous Cargo Signage (Placards) on Major Roadways. (p 69-70)	• DAC LEPC Hazardous Cargo Subcommittee; DAC Office of EM • Phase I - $20,00 Phase II - $40,000 Phase III - $5,000/yr • None Provided	In Progress	Delete	A Hazardous Cargo Route Study will be completed in April 2012, however, the scope of the mitigation plan only covers natural hazards and not man-made/technological hazards.
Action Item #7.1: Efforts to Reduce Hazardous Material Dumping. (p 70)	• DAC Office of EM • Phase I – Staff Time and Equipment Phase II - $10,000/yr • None Provided	No Action	Delete	Lack of funding and personnel
Action Item #7.2: Public Education Regarding Hazardous Material Storage. (p 70-71)	• DAC Office of EM • $500,000 for Equipment and vehicles plus Staff Time • None Provided	No Action	Delete	Lack of funding and personnel
Action Item #8: Public Education and Public Notification Regarding Severe Weather (Including Winter Storms and Extreme Heat). (p 71)	• DAC Office of EM • None Provided • None Provided	In Progress	Keep	Doña Ana County is in the process being Certified as a StormReady community by the National Weather Service

Table 4-6-1
Assessment of mitigation actions/projects identified by Doña Ana County in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
Action Item #9: Reduce the Risk of Urban Fires. (p 71-72)	• DAC Office of EM • $5,000 for Study/Survey; $20,000 for Fire and Police Backup Generators; Staff Time • None Provided	No Action	Delete	Responsibility of the Las Cruces Fire Department
Action Item #10: Improve Emergency Communication Capabilities to facilitate better warning and Emergency Response to Tornado, High Winds, Terrorism events, and Other Emergencies. (p 72)	• DAC Office of EM • $20,000 for Phase I surveys plus Staff Time • None Provided	In Progress	Revise	Ongoing activity. Revision will remove "Terrorism events, and Other Emergencies" wording from the project description.
Action Item #11: Develop a County-Wide Flood Warning and Response System. (p 72-73)	• DAC Flood Commission • Phase I - $20,000 Phase II - $300,000 Phase III - $100,000/yr • 2015 (10-Yr Plan)	In Progress	Keep	DAC Flood Commission is working with all agencies to coordinate project.
Action Item #12: Install Staff Gages at Selected Low Water (Roadway) Crossings. (p 73)	• DAC Flood Commission • $10,000 plus annual maintenance costs • None Provided	In Progress	Keep	DAC Flood Commission is working with all agencies to coordinate project.
Action Item #13: Develop a County-Wide Dam Safety Program. (p 73)	• DAC Flood Commission • $1 million over 5 years • None Provided	In Progress	Keep	DAC Flood Commission is working with all agencies to coordinate project.

Table 4-6-2
Assessment of mitigation actions/projects identified by Hatch in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
3. Village of Hatch Action Item: Provide Backup Power for Village-Owned Critical Facilities. (pp 64-65).	• Village of Hatch • Phase 1 = $24,000 Phase 2 = $12,000 Phase 3 = $3,000 Phase 4 = None Provided • 2005-2010	Completed	Delete	Backup generators purchased for water and wastewater facilities, the community center, and the police department.
Action Item #2: Evaluate and adopt Building Codes (pp 67-68)	• Hatch Building Official • Staff Time • None Provided	In Progress	Keep	Hatch, New Mexico: Village Code; updated and passed July 12, 2011 Village of Hatch working to establish local permitting process and code enforcement.
Action Item #3: Reduce Flood Risks throughout Doña Ana County. (p 68)	• Village of Hatch Board of Trustees and Planning Department • $11 million + Staff Time • None Provided	In Progress	Keep	In 2007-2008, roadway and storm drain improvements were conducted throughout the Village of Hatch with the intent to better control and mitigate local drainage deficiencies. Efforts are underway to construction the North Spring Dam in order to detain and divert storm water runoff away from populated areas and critical facilities
Action Item #7.1: Efforts to Reduce Hazardous Material Dumping. (p 70)	• Village of Hatch Code Enforcement • Phase I – Staff Time and Equipment Phase II - $10,000/yr • None Provided	No Action	Keep	Hatch, New Mexico: Village Code; updated and passed July 12, 2011 Village of Hatch working to establish local permitting process and code enforcement.

Table 4-6-3
Assessment of mitigation actions/projects identified by Las Cruces in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
2. City of Las Cruces Action Item: Increase Public Awareness related to the National Flood Insurance Program (NFIP). (p 64)	• City of Las Cruces • Staff Time • None Provided	In Progress (on-going)	Keep	The City of Las Cruces is now a Class-6 in the NFIP – CRS Program. We will continue to strive for a better rating.
Action Item #2: Evaluate and adopt Building Codes. (pp 67-68)	• Las Cruces Building Official • Staff Time • None Provided	In Progress (on-going)	Keep	The City of Las Cruces adopted the 2006 IBC on November of 2008, with Ordinance 2478. We will continue to evaluate and update the building codes.
Action Item #3: Reduce Flood Risks throughout Doña Ana County. (p 68)	• City of Las Cruces City Council and Planning Department • $11 million + Staff Time • None Provided	In Progress (on-going)	Revise	Joseph Lane Pond – completed 2011/69K Waterfalls Detention – completed 2010/3M Del Rey Crossing – completed 2011/2.1M We have a much bigger list than shown and we continue to bring in more drainage projects every year. Action/project will be revised to be more project specific, with measurable actions and a projected timeline.
Action Item #7.1: Efforts to Reduce Hazardous Material Dumping. (p 70)	• City of Las Cruces Code Enforcement • Phase I – Staff Time and Equipment Phase II - $10,000/yr • None Provided	In Progress (on-going)	Keep	The City of Las Cruces has produced a GIS "Dump Site" map to aid in reducing hazardous dumping. It will be used in conjunction with Fines in the Criminal Penalty (sec. 34-136) of our Strom Water Ordinance 2146 (11-01-04).

Table 4-6-4
Assessment of mitigation actions/projects identified by Mesilla in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
4. Town of Mesilla Action Item: A Life Safety Initiative "Turn Around Don't Drown". (pp 65-66)	• Town of Mesilla • $200 per barricade; $800 per flood warning sign • 2005-2010	No Action	Keep	Awaiting funding to become available
Action Item #2: Evaluate and adopt Building Codes (pp 67-68)	• Mesilla Building Official • Staff Time • None Provided	Complete	Delete	IBC and IFC adopted, 2005
Action Item #3: Reduce Flood Risks throughout Doña Ana County. (p 68)	• Town of Mesilla Town Council and Planning Department • $11 million + Staff Time • None Provided	No Action	Revise	Lack of available funds. Action/Project will be revised to reflect specific actions/projects that are measurable and have projected completion schedules.
Action Item #7.1: Efforts to Reduce Hazardous Material Dumping. (p 70)	• Town of Mesilla Code Enforcement • Phase I – Staff Time and Equipment Phase II - $10,000/yr • None Provided	In Progress	Keep	enforcement ongoing

Table 4-6-5
Assessment of mitigation actions/projects identified by Sunland Park in the previous plan cycle

Action / Project Title	• Lead Agency • Proposed Cost • Proposed Comp Date	Status	Disposition	Explanation
5. City of Sunland Park Action Item: Submit an Application to Participate in the NFIP. (p 66)	• City of Sunland Park • Staff Time • None Provided	Complete	Delete	Already joined.
Action Item #2: Evaluate and adopt Building Codes (pp 67-68)	• Sunland Park Building Official • Staff Time • None Provided	Complete	Delete	Already adopted.
Action Item #3: Reduce Flood Risks throughout Doña Ana County. (p 68)	• City of Sunland Park City Council and Planning Department • $11 million + Staff Time • None Provided	In progress/on-going	Delete	Sunland Park will continue to enforce developers to address and correct problems with flooding in areas of new development.
Action Item #7.1: Efforts to Reduce Hazardous Material Dumping. (p 70)	• City of Sunland Park Code Enforcement • Phase I – Staff Time and Equipment Phase II - $10,000/yr • None Provided	In progress/on-going	Delete	Sunland Park will continue to enforce the restriction of the dumping of HAZMAT through strict code enforcement and fines.

4.3.2 New Mitigation Actions / Projects and Implementation Strategy

Upon completion of the assessment summarized in Section 4.3.1, the Steering Committee and each jurisdiction's Local Planning Team developed new A/Ps using the goals, results of the vulnerability analysis and capability assessment, and the Steering Committee's institutional knowledge of hazard mitigation needs in the County and jurisdictions. The A/Ps can be generally classified as either structural or non-structural. Structural A/Ps typify a traditional "bricks and mortar" approach where physical improvements are provided to effect the mitigation goals. Examples may include forest thinning, channels, culverts, bridges, detention basins, dams, emergency structures, and structural augmentations of existing facilities. Non-structural A/Ps deal more with policy, ordinance, regulation and administrative actions or changes, buy-out programs, and legislative actions. For each A/P, the following elements were identified:

- **Name** – a unique short name for the A/P.
- **Hazard(s) Mitigated** – a list of the hazard or hazards mitigated by the A/P.
- **Community Assets Mitigated** – a brief descriptor to qualify the type of assets (existing, future, or both) that the proposed mitigation A/P addresses.
- **Description** – a brief description of the A/P including a supporting statement that tells the "what" and "why" reason for the A/P.
- **Estimated Costs** – concept level cost estimates that may be in dollars, staff time, or both.

Once the full list of A/Ps was completed to the satisfaction of the jurisdiction, the Local Planning Team then performed a STAPLE+E assessment [1] of each A/P using one of three qualifiers for each STAPLE+E category as follows:

- **F** – assigned if the A/P has a favorable disposition for the category.
- **L** – assigned for A/Ps that are less than favorable for the category
- **N** – assigned if the A/P is neutral for the category.

Once the STAPLE+E assessment was completed, each jurisdiction then assigned a numeric ranking to each A/P based on the assessment results and the jurisdiction's priorities.

Upon completion of the ranking process, each jurisdiction then developed the implementation strategy for the A/Ps. The implementation strategy addresses the *"how, when, and by whom?"* questions related to the execution and completion of an identified A/P. Specific elements identified as a part of the implementation strategy included:

- **Planning Mechanism(s) for Implementation** – where applicable, a list of current planning mechanisms or processes under which the A/P will be implemented. Examples could include CIPs, General Plans, Area Drainage Master Plans, etc.

[1] FEMA, 2003, *Developing the Mitigation Plan – Identifying Mitigation Actions and Implementation Strategies*, FEMA 386-3, pp 2-12 through 2-21.

- **Anticipated Completion Date** – a realistic and general timeframe for completing the A/P. Examples may include a specific target date, a timeframe contingent upon other processes, or recurring timeframes.
- **Primary Agency and Job Title Responsible for Implementation** –the agency, department, office, or other entity and corresponding job title that will have responsibility for the A/P and its implementation.
- **Funding Source** – the source or sources of anticipated funding for the A/P.

Tables 4-7-1 and 4-7-2 summarize the new mitigation A/Ps and implementation strategy for Doña Ana County. Similarly, Tables 4-8-1 through 4-14-1 and Tables 4-8-2 through 4-14-2 summarize the new mitigation A/Ps and implementation strategy for Anthony, EBID, Hatch, Las Cruces, Mesilla, NMSU, and Sunland Park, respectively.

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A1. Doña Ana County FIRM Upgrade to DFIRM	Flood	Both	Finalize the process of updating the County-wide FIRMs to a Digital (DFIRM) format. Efforts include final coordination with local governmental agencies, FEMA and IBWC for resolution of comments and issues with current mapping.	Federal Funding FEMA Region VI initial mapping budget is $250M; local share through CTP program.	F	F	F	F	F	L	F	1

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A2. Upgrade Flood Protection Capabilities of the Rio Grande Canalization Project.	Flood	Both	Evaluate and if required, restore the flood protection capabilities of the Rio Grande Canalization Project. Coordinate with the US International Boundary and Water Commission (USIBWC) to incorporate technical data regarding the Rio Grande Canalization Project. Based on information provided by the USIBWC, the water surface profiles for the Rio Grande Canalization Project were developed by the US Army Corps of Engineers (USACOE) Albuquerque District in a study completed in 1998. The study indicates that some reaches of the levee system from Percha Dam, located downstream of Caballo Dam, to the American Dam, located downstream of Sunland Park, NM, will be overtopped in a 100-year flood and other reaches provide protection with limited freeboard.	Federal Funding through USIBWC and USACOE will fund and conduct hydraulic studies, geotechnical studies, etc.	F	F	F	F	F	F	F	2

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A3. Public Education and Public Notification Regarding Severe Weather	Dam Failure, Flood, Extreme Cold, Severe Wind	Both	Severe winter storm hazards result in auto accidents, power outages, structural failures, loss of access to emergency services, and possible casualties from overexposure. Experience has shown that no area can prepare fully for severe winter storms. Other severe storms that have occurred in Doña Ana County include wind, dust, and hail. Extreme heat can result in power outages, fire, and, in time, drought. However, measures can be taken to inform the public of these hazardous conditions and ways to reduce the associated risks. Cooperation between local businesses such as insurance agents, state agencies, and other organizations could provide training for bad weather driving, for example. Training sessions could be conducted in schools or another suitable forum on how to be protected in the event of a hazardous weather condition on routes to and from school. Each school has a NOAA (National Oceanic and Atmospheric Administration/National Weather Service) weather radio provided by the Office of Emergency Management to help provide early warning for severe winter weather. The Office of Emergency Management has provided NOAA Weather Radios to all government buildings, schools, hospitals, and other critical facilities in Doña Ana County.	Contributions from local business and volunteer work.	F	F	F	F	F	F	F	3

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A4. Improve Emergency Communication Capabilities To Facilitate Better Warning And Emergency Response To Severe Weather Conditions.	All Hazards	Both	Due to their sudden, abrupt nature and limited predictability, improvement in the communications network will help to provide warning in case of a flood, tornado, terrorism incident, or other event. This effort should begin with a survey of the entire county to identify amateur radio operators, receivers and repeaters, cellular towers, and power sustainability. The survey could be used to determine what resources are available and what critical warning and communications system back-up would be necessary for all local Fire Departments, Police and Sheriff Departments.	Phasing of costs at $10,000 / Phase with a minimum of three phases.	F	F	F	F	F	F	F	4

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A5. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Initiate a ten-year plan to develop a countywide Flood Warning and Response System. Utilize existing rain gage data, including dam failure warnings, to develop a system to forecast flood events based on real time rainfall data. Modify the Doña Ana County Emergency Response Plan to incorporate a Flood Warning and Response capabilities section. As real-time data is available from current sources (and any newly installed systems) the Doña Ana County Flood Commission can develop the capacity to analyze the hydrologic data and develop a flood warning system that includes: (1) Evaluation of existing rain and stream gages (2) Installation of needed gages with real time telemeter capability (3) Obtaining a Storm Ready certification from the NWS (4) Installation of a NEXRAD system	$500,000.00 estimated initial with additional phases with costs to follow.	F	F	F	F	F	F	F	5

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A6. Install Staff Rain Gages at Low Water Crossings and Arroyos throughout the County.	Flood	Existing	Install Rain Gauges at selected (hazardous) locations. The Rain Gauge is a localized flood threat recognition system that enables motorists to see how deep the water is and avoid risking their cars and lives. They can be installed by agencies responsible for the streets and highways in each community. Each community would be responsible for identifying locations and providing a listing and priority ranking for sites where gages should be installed.	$20,000 estimated initial purchase of a dozen with more to follow.	F	F	F	F	F	F	F	8
A7. Develop a County-Wide Dam Safety Program	Dam Failure	Both	Utilize the data contained in the Doña Ana County Mitigation Plan and compile a detailed inventory of all dams in Doña Ana County. Identify high-risk dams based on age, elevation, maintenance and operation plans, and state or Federal designations that do not have dam failure emergency action plans. Solicit funding to conduct inspections or dam failure analysis and compile a countywide database. Develop a countywide dam safety program.	$1 million (est) to be phased over a five-year period.	F	F	F	F	F	F	F	7

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A8. Become a Storm-Ready Community	Dam Failure, Flood, Extreme Cold, Severe Wind	Both	Becoming a designated StormReady community is one way to ensure that a community is prepared for localized flooding. The StormReady program is administered by the National Weather Service (NWS) to help communities become better prepared for storms and other natural disasters. Furthermore, pursuant to FEMA's NFIP CRS Program, Activity 610, Flood Warning Program, program points are allotted for the designation by the National Weather Service as a StormReady community.	Contributions from local business and volunteer work.	F	F	F	F	F	F	F	6
A9. Evaluate, update, and adopt Building Codes.	All Hazards	Both	Each community should evaluate their existing building codes (UBC, SB, IBC and others) in addition to State Law requirements to determine which code would be appropriate for adoption. It is recommended that all communities select the same code for consistency and will improve the level of regional protection.	Staff Time	F	F	F	F	F	F	F	9
A10. Drought Related Public Education and Outreach	Drought	Both	Conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff plus $5,000	F	F	F	F	F	F	F	10

Table 4-7-1
Mitigation actions/projects identified by Doña Ana County

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
A11. Drought Resistant Landscape Regulation	Drought	Both	Encourage and/or mandate the use of drought resistant landscaping , as appropriate, through ordinance development and/or enforcement.	Staff Time	N	F	F	N	N	F	F	11
A12. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	12
A13. Wildfire Education and Public Outreach	Wildfire	Both	Conduct regular public outreach events to disseminate information regarding fire risk and hazards, using flyers, pamphlets, and website notices.	Staff + $2,000/yr	F	F	F	F	F	F	F	13

Table 4-7-2
Mitigation actions/projects implementation strategy for Doña Ana County

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
A1. Doña Ana County FIRM Upgrade to DFIRM	N/A	Jan 2020	Doña Ana County Flood Commission	General Fund & Mitigation Grants
A2. Upgrade Flood Protection Capabilities of the Rio Grande Canalization Project.	N/A	FY 2020	Doña Ana County Flood Commission	Costs by Local Govt through General Fund & Mitigation Grants
A3. Public Education and Public Notification Regarding Severe Weather	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund & Mitigation Grants
A4. Improve Emergency Communication Capabilities To Facilitate Better Warning And Emergency Response To Severe Weather Conditions.	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund & Homeland Security Grants
A5. County-Wide Flood Warning and Response System	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund & Mitigation Grants
A6. Install Staff Rain Gages at Low Water Crossings and Arroyos throughout the County.	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund & Mitigation Grants

Table 4-7-2
Mitigation actions/projects implementation strategy for Doña Ana County

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
A7. Develop a County-Wide Dam Safety Program	N/A	Annually (As needed)	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund & Mitigation Grants
A8. Become a Storm-Ready Community	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund
A9. Evaluate, update, and adopt Building Codes.	N/A	Annually (As needed)	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund
A10. Drought Related Public Education and Outreach	N/A	Annually	OEM and Doña Ana County Flood Commission with Local Govt Jurisdictional Participation	General Fund
A11. Drought Resistant Landscape Regulation	County Code Chapter 157, Article VIII, §157-52.B	Ongoing as needed	Community Development, Director	General Fund
A12. Defensible Space Practices	CWPP	Ongoing as needed	Doña Ana County OEM with local Fire District Support	General Fund
A13. Wildfire Education and Public Outreach	CWPP	Annually	Doña Ana County OEM with local Fire District Support	General Fund

Table 4-8-1
Mitigation actions/projects identified by Anthony

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
B1. Anthony Stormwater Master Plan	Flood	Existing	Develop a stormwater master plan to identify existing flood hazards and mitigation alternatives.	$500,000	F	F	F	F	F	F	F	1
B2. Join NFIP	Flood	Both	Prepare and adopt a floodplain management ordinance and submit application to FEMA to join the NFIP	Staff Time	F	F	F	F	F	N	F	2
B3. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff Time	F	F	F	F	F	F	F	3
B4. Drought Resistant Landscape Regulation	Drought	Both	Encourage and/or mandate the use of drought resistant landscaping , as appropriate, through ordinance development and/or enforcement.	Staff Time	N	F	F	N	N	F	F	4
B5. Building Code Review, Update and/or Adoption	Flood, Extreme Cold, Severe Wind	Both	Assess and review existing building codes, and implement necessary updates as needed to maintain current standards and compliance with State Law requirements	Staff Time	N	F	F	F	F	F	F	5

Table 4-8-1
Mitigation actions/projects identified by Anthony

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
B6. Assist Doña Ana County To Improve Emergency Communications County-Wide	Dam Failure, Extreme Cold, Flood, Severe Wind, Wildfire	Both	Work in cooperation with Doña Ana County to improve county-wide emergency communications and hazard event warning capacity. Provide assistance with identifying community specific resources (amateur radio operators, receivers and repeaters, cellular towers, power sustainability, and critical warning and communications systems) as well as providing feedback regarding anticipated resource needs.	Staff Time	F	F	F	F	F	F	F	6
B7. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop a countywide Flood Warning and Response System, by providing localized feedback regarding potential locations for local gages and targeted populations to receive warnings.	Staff Time	F	F	F	F	F	F	F	7
B8. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	8

Table 4-8-1
Mitigation actions/projects identified by Anthony

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
B9. Flood Retarding Structure Emergency Action Plan Development	Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop Emergency Action Plans for the county owned flood retarding structures located upstream of the City.	Staff Time	F	F	F	F	F	F	F	9

Table 4-8-2
Mitigation actions/projects implementation strategy for Anthony

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
B1. Anthony Stormwater Master Plan	CIP	2015	City Council / Mayor	Grant / CIP
B2. Join NFIP	N/A	2017	City Council / Mayor	General Fund
B3. Drought Related Public Education and Outreach	N/A	Annually with County	City Council / Mayor	General Fund

Table 4-8-2
Mitigation actions/projects implementation strategy for Anthony

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
B4. Drought Resistant Landscape Regulation	City Code	Ongoing as needed	City Council / Mayor	General Fund
B5. Building Code Review, Update and/or Adoption	City Code	Annually	City Council / Mayor	General Fund
B6. Assist Doña Ana County To Improve Emergency Communications County-Wide	N/A	Annually	City Council / Mayor	General Fund
B7. County-Wide Flood Warning and Response System	N/A	As Needed per County Schedule	City Council / Mayor	General Fund
B8. Defensible Space Practices	CWPP	Ongoing as needed	City Council / Mayor	General Fund
B9. Flood Retarding Structure Emergency Action Plan Development	County Flood Commission	Ongoing as needed	City Council / Mayor	General Fund

Table 4-9-1
Mitigation actions/projects identified by EBID

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
C1. Diez Lagos Project	Flooding	Both	Design and construct a widened drain that provides storm water retention, which will help reduce flooding in the Santa Teresita area when storm/drain flows overwhelm the Nemexas siphon.	$650,000	F	F	F	F	F	F	F	1
C2. Flood Control Dam EAP's	Flooding, Dam Failure	Both	Prepare & submit an emergency action plan for each EBID sponsored dam to help prepare EBID and emergency managers in the event of an extreme rainfall event. There are 17 separate dams	$1,360,000	F	F	N	F	F	L	F	2
C3. Placitas Arroyo	Dam Failure, Flooding	Both	Village of Hatch Drainage Plan; EBID to implement a storm water warning system for the Placitas Arroyo and flood retarding structures. The system's design will be coordinated with the construction of other proposed drainage facilities for the Village of Hatch to help prevent storm flows from flooding the town.	$1,000,000	F	F	F	F	F	F	F	3
C4. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff Time	F	F	F	F	F	F	F	4

Table 4-9-1
Mitigation actions/projects identified by EBID

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
C5. Groundwater Recharge Opportunities	Drought, Flood	Both	Perform preliminary in-house reconnaissance to locate potential drainage retention sites that would control and capture flood flows for eventual recharge to the aquifer and possible irrigation use.	Staff Time	F	F	F	F	F	F	F	5

Table 4-9-2
Mitigation actions/projects implementation strategy for EBID

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
C1. Diez Lagos Project	N/A	2014	EBID Maintenance	Water Trust Board Grant
C2. Flood Control Dam EAP's	N/A	2 by 12/2012 5 by 12/2013 5 by 12/2014 5 by 12/2015	EBID Engineering	In house & LID
C3. Placitas Arroyo	N/A	2017	EBID/Village of Hatch	Community Grant
C4. Drought Related Public Education and Outreach	N/A	Annually with County	EBID / Doña Ana County	General Fund

Table 4-9-2 Mitigation actions/projects implementation strategy for EBID				
Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
C5. Groundwater Recharge Opportunities	N/A	2017	EBID Engineering	In house & LID

Table 4-10-1
Mitigation actions/projects identified by Hatch

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
D1. Evaluate and Update Building Code	Extreme Cold, Flood, Severe Wind, Drought	Both	Each community should evaluate and update to the latest edition of building codes (UBC, SB, IBC and others) in addition to State Law requirements. It is recommended that all communities select the same code for consistency. Adoption and or update of the entire International Building Code Series by each community was recommended by the Mitigation Committee; however, State Law requirements must be satisfied prior to individual community adoption.	≈$4,000 + Staff Time	F	F	F	L	N	F	F	1
D2. Village of Hatch Drainage Master Plan	Flood	Both	Develop a Drainage Master Plan for the Village of Hatch to identify existing and future runoff conditions. As part of the plan, identify critical areas and identify future capital improvement projects for the area.	≈$250,000 + Staff Time	F	F	F	F	N	F	F	2

Table 4-10-1
Mitigation actions/projects identified by Hatch

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
D3. Reduce Flood Risk for Village of Hatch	Flood	Future	Areas in Doña Ana County have an increased flood risk due to development. Options for reducing the risk include relocation of the residents and construction of drainage and flood protection projects such as a permitted dam and interceptor channel project upstream from the Village of Hatch. Another option for reducing the risk is to educate individuals directly or indirectly involved with development within the identified floodplain so that property owners, developers, lenders, real estate agents, and the general public will be aware that development permits are required for any development. Proposed development within identified floodplains must be required to meet elevation requirements that will be enforced by each community.	≈$8 Million + Staff Time	F	F	L	F	N	F	F	3
D4. Village of Hatch Storm Drain Upgrade and Expansion	Flood	Future	Implement system upgrades through coordination with local jurisdictions and develop a plan/process to utilize existing conveyance channels, drainage facilities, and Right of Ways, to upgrade or design and construct surface/subsurface storm water improvements to help mitigate runoff effectively through the community. Implement improvements through phases according to jurisdictional requirements and funding availability.	≈$900,000	F	F	F	L	N	F	F	4

Table 4-10-1
Mitigation actions/projects identified by Hatch

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
D5. Efforts to Reduce Hazardous Material Dumping	Public Health Hazard	Future	Illegal dumping of hazardous materials, in addition to violating the law, can result in major environmental and health problems in Doña Ana County. Code enforcement, in cooperation with appropriate law enforcement agencies, should attempt to document and identify the most frequent areas where illegal dumping occurs. Education by the Code Enforcement Office could be provided to the general public via training classes, billboards, news media, City of Las Cruces and Doña Ana County web sites, and other methods, regarding the proper procedures for dumping and recycling. Many communities place signage that contains phrases such as "Please don't feed the storm drains" and "Drains to Creek/River" on or near drains to discourage intentional or unintentional dumping.	≈$10,000	F	F	L	F	N	F	F	5
D6. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop a countywide Flood Warning and Response System, by providing localized feedback regarding potential locations for local gages and targeted populations to receive warnings.	Staff Time	F	F	F	F	F	F	F	6

Table 4-10-1
Mitigation actions/projects identified by Hatch

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
D7. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff Time	F	F	F	F	F	F	F	7
D8. Drought Resistant Landscape Regulation	Drought	Both	Encourage and/or mandate the use of drought resistant landscaping , as appropriate, through ordinance development and/or enforcement.	Staff Time	N	F	F	N	N	F	F	8
D9. Assist Doña Ana County To Improve Emergency Communications County-Wide	Dam Failure, Extreme Cold, Flood, Severe Wind, Wildfire	Both	Work in cooperation with Doña Ana County to improve county-wide emergency communications and hazard event warning capacity. Provide assistance with identifying community specific resources (amateur radio operators, receivers and repeaters, cellular towers, power sustainability, and critical warning and communications systems) as well as providing feedback regarding anticipated resource needs.	Staff Time	F	F	F	F	F	F	F	9
D10. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	10

Table 4-10-1
Mitigation actions/projects identified by Hatch

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
D11. Flood Retarding Structure Emergency Action Plan Development	Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop Emergency Action Plans for the county owned flood retarding structures located upstream of the Village.	Staff Time	F	F	F	F	F	F	F	11

Table 4-10-2
Mitigation actions/projects implementation strategy for Hatch

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
D1. Evaluate and Update Building Code	N/A	Annually	Planning Development Department / Building Official	General Funds
D2. Village of Hatch Drainage Master Plan	N/A	FY 2016	Village of Hatch / Mayor	HMGP/ FMA/General Funds

Table 4-10-2
Mitigation actions/projects implementation strategy for Hatch

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
D3. Reduce Flood Risk for Village of Hatch	Public Outreach / 5 YR. CIP	Annually / FY 2016	Village of Hatch/Doña Ana County	HMGP/ FMA/General Funds
D4. Village of Hatch Storm Drain Upgrade and Expansion	5 YR. CIP	FY 2016	Village of Hatch / Mayor	HMGP/ FMA/General Funds
D5. Efforts to Reduce Hazardous Material Dumping	Advertisement/ Public Outreach	Annually	Village of Hatch / Mayor	General Funds
D6. County-Wide Flood Warning and Response System	N/A	Annually (per County schedule)	Village of Hatch / Mayor	General Fund
D7. Drought Related Public Education and Outreach	N/A	Annually with County	Village of Hatch / Mayor	General Fund
D8. Drought Resistant Landscape Regulation	Village Code	Ongoing as needed	Planning Development Department / Building Official	General Fund
D9. Assist Doña Ana County To Improve Emergency Communications County-Wide	N/A	Annually	Public Works Department / Director	General Fund
D10. Defensible Space Practices	CWPP	Ongoing as needed	Planning Development Department / Building Official	General Fund

Table 4-10-2
Mitigation actions/projects implementation strategy for Hatch

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
D11. Flood Retarding Structure Emergency Action Plan Development	DACFC Planning	Per DACFC Schedule	Public Works Department / Director	General Fund

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E1. Increase Public Awareness related to the National Flood Insurance Program (NFIP).	Flood	Both	This Action Item is to sponsor countywide NFIP Workshops for insurance agencies, lenders, community officials, developers, engineers, surveyors and local citizens. The goal is also to increase the number of flood insurance policies.	Staff time;	F	F	F	F	F	F	F	1

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E2. Digital Flood Insurance Rate Map (DFIRMS)	Flood	Both	Coordinate with the Federal Emergency Management Agency (FEMA) to have the DFIRM effective; and go to City Council to formally adopt them.	Staff time;	F	F	F	F	F	F	F	2
E3. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Initiate a ten-year plan to develop a countywide Flood Warning and Response System. Utilize existing rain gage data, including dam failure warnings, to develop a system to forecast flood events based on real time rainfall data. Modify the Doña Ana County Emergency Response Plan to incorporate a Flood Warning and Response capabilities section. As real-time data is available from current sources (and any newly installed systems) the Doña Ana County Flood Commission can develop the capacity to analyze the hydrologic data and develop a flood warning system that includes:(1) Evaluation of existing rain and stream gages; (2) Installation of needed gages with real time telemeter capability; (3) Obtaining a Storm Ready certification from the NWS; (4) Installation of a NEXRAD system	Staff time; $500,000 estimated initial with additional phases with costs to follow.	F	F	F	F	F	F	F	3

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E4. Develop a County-Wide Dam Safety Program	Dam Failure	Both	Utilize the data contained in the Doña Ana County Mitigation Plan and compile a detailed inventory of all dams in Doña Ana County. Identify high-risk dams based on age, elevation, maintenance and operation plans, and state or Federal designations that do not have dam failure emergency action plans. Solicit funding to conduct inspections or dam failure analysis and compile a countywide database. Develop a countywide dam safety program.	$100,000 (est) to be phased over a five-year period.	F	F	F	F	F	F	F	4
E5. Install Staff Rain Gages at Low Water Crossings and Arroyos throughout the County.	Flood	Both	Install Rain Gauges at selected (hazardous) locations. The Rain Gauge is a localized flood threat recognition system that enables motorists to see how deep the water is and avoid risking their cars and lives. They can be installed by agencies responsible for the streets and highways in each community. Each community would be responsible for identifying locations and providing a listing and priority ranking for sites where gages should be installed.	Staff time; $20,000 estimated initial purchase of a dozen with more to follow.	F	F	F	F	F	F	F	5

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E6. Become a Storm-Ready Community	Flooding, Extreme Cold, Severe Wind	Both	Becoming a designated StormReady community is one way to ensure that a community is prepared for localized flooding. The StormReady program is administered by the National Weather Service (NWS) to help communities become better prepared for storms and other natural disasters. Furthermore, pursuant to FEMA's NFIP CRS Program, Activity 610, Flood Warning Program, program points are allotted for the designation by the National Weather Service as a StormReady community.	Staff time; Contributions from local business and volunteer work.	F	F	F	F	F	F	F	6
E7. Evaluate and Adopt Updated Building Codes.	Drought, Flood, Extreme Cold, Severe Wind	Both	The City of Las Cruces will continue to evaluate and adopt new building codes, as appropriate, to provide the latest and most up-to-date regulatory tools for reducing natural hazard risks to new and substantially improved structures.	Staff time;	F	F	F	F	F	F	F	7

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E8. Reduce Hazardous Material Dumping.	HAZMAT	Both	Illegal dumping of hazardous materials, in addition to violating the law, can result in major environmental and health problems in Doña Ana County. Las Cruces Code enforcement, in cooperation with appropriate law enforcement agencies, should attempt to document and identify the most frequent areas where illegal dumping occurs.	Staff time	F	F	F	F	F	F	F	8
E9. Water Conservation Program – Education and Outreach	Drought	Both	The City of Las Cruces will continue to conduct a utility service-wide, county-wide public education campaign to raise awareness of water conservation and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets	Staff Time	F	F	F	F	F	F	F	9
E10. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	10

Table 4-11-1
Mitigation actions/projects identified by Las Cruces

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
E11. Wildfire Education and Public Outreach	Wildfire	Both	Conduct regular public outreach events to disseminate information regarding fire risk and hazards, using flyers, pamphlets, and website notices.	Staff + $2,000/yr	F	F	F	F	F	F	F	11

Table 4-11-2
Mitigation actions/projects implementation strategy for Las Cruces

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
E1. Increase Public Awareness related to the National Flood Insurance Program (NFIP).	Conduct training sessions independently as well as through the New Mexico Floodplain Managers Association Workshops	Ongoing	City of Las Cruces - Public Works Department / Floodplain Administrator	General Fund

Table 4-11-2
Mitigation actions/projects implementation strategy for Las Cruces

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
E2. Digital Flood Insurance Rate Map (DFIRMS)	Revise existing City Ordinance to identify DFIRM information	Ongoing	City of Las Cruces Public Works Department / Floodplain Administrator	General Fund
E3. County-Wide Flood Warning and Response System	Coordinate with Doña Ana County, Office of Emergency Management, and the National Weather Service.	2022	OEM and Local Governmental Jurisdictions	General Fund
E4. Develop a County-Wide Dam Safety Program	Coordinate with Doña Ana County, Office of Emergency Management, as well as Dam owners.	Annually	OEM and Local Governmental Jurisdictions	General Fund
E5. Install Staff Rain Gages at Low Water Crossings and Arroyos throughout the County.	Coordinate with Doña Ana County, Office of Emergency Management, NOAA, Elephant Butte Irrigation District as well as property owners.	Ongoing	OEM and Local Governmental Jurisdictions	General Fund
E6. Become a Storm-Ready Community	Coordinate with Doña Ana County, Office of Emergency Management, and the National Weather Service.	Ongoing	OEM and Local Governmental Jurisdictions	General Fund

Table 4-11-2
Mitigation actions/projects implementation strategy for Las Cruces

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
E7. Evaluate and Adopt Updated Building Codes	In general, the City updates when the State does.	Ongoing	City of Las Cruces - Community Development / Building & Development Service Administrator	General Fund
E8. Reduce Hazardous Material Dumping	Education by the media, City of Las Cruces & Doña Ana County web sites, and other methods, regarding the proper procedures for dumping and recycling.	Ongoing	City of Las Cruces Police Department / Codes Enforcement	General Fund
E9. Water Conservation Program –Education and Outreach	City of Las Cruces Water Conservation Plan	Annually	City of Las Cruces Utilities Department / Water Conservation Coordinator	Water Utility Fund
E10. Defensible Space Practices	CWPP	Ongoing as needed	City of Las Cruces Fire Department / Fire Chief	General Fund
E11. Wildfire Education and Public Outreach	CWPP	Annually	City of Las Cruces Fire Department / Fire Chief	General Fund

Table 4-12-1
Mitigation actions/projects identified by Mesilla

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
F1. Upgrade/ Repair Mesilla Community Center to serve as Cooling/ Heating Station	Extreme Cold	Both	Continue upgrades to the Community Center so that in extreme weather conditions citizens could be temporarily housed there.	$490,000	F	F	F	F	F	N	F	1
F2. Rehabilitate/ Repair Public Safety Building	Dam Failure, Flood, Extreme Cold, Severe Wind	Both	Stabilize/Repair structure and upgrade environmental and electrical systems to withstand severe weather impacts. Building serves as the staging area and command center for community responses to all hazards.	$680,000	N	F	F	N	F	L	F	2
F3. Storm Drain Inspections and Repairs	Flood	Both	Inspect and repair storm drains to effectively handle runoff when flood conditions exist	$175,000	N	F	F	N	F	F	F	3

Table 4-12-1
Mitigation actions/projects identified by Mesilla

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
F4. Implement the Life Safety Initiative "Turn Around Don't Drown"	Flood	Existing	The National Weather Service (NWS) has introduced a national flood safety initiative "Turn around Don't Drown". The "Turn Around Don't Drown" campaign termed "TADD" has been endorsed by numerous communities and agencies nationwide. The TADD initiate is a solution to minimize the loss of lives each year when motorists drive into floodwaters. The simple solution is to stay out of flooded roadways. The NWS program is geared to inform the public of these dangers. Communities have the opportunity to participate in a number of ways: 1) Post TADD information and TADD icons on community WebPages; 2) Place TADD bumper stickers on all community vehicles; 3) Construct TADD barricades that can be placed at selected low water crossings during flooding conditions; 4) Install flood warning (TADD) signage on roadways in selected areas; 5) Initiate public education efforts	$1,800	N	F	F	F	F	N	N	4
F5. Reduce Hazardous Material Dumping	HAZMAT	Both	Reduce the amount of HAZMATs that are dumped within the Town limits through enforcement of local ordinance and regulations	Staff Time	N	F	F	F	F	F	F	5

Table 4-12-1
Mitigation actions/projects identified by Mesilla

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
F6. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop a countywide Flood Warning and Response System, by providing localized feedback regarding potential locations for local gages and targeted populations to receive warnings.	Staff Time	F	F	F	F	F	F	F	6
F7. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff Time	F	F	F	F	F	F	F	7
F8. Drought Resistant Landscape Regulation	Drought	Both	Encourage and/or mandate the use of drought resistant landscaping , as appropriate, through ordinance development and/or enforcement.	Staff Time	N	F	F	N	N	F	F	8

Table 4-12-1
Mitigation actions/projects identified by Mesilla

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
F9. Assist Doña Ana County To Improve Emergency Communications County-Wide	Dam Failure, Extreme Cold, Flood, Severe Wind, Wildfire	Both	Work in cooperation with Doña Ana County to improve county-wide emergency communications and hazard event warning capacity. Provide assistance with identifying community specific resources (amateur radio operators, receivers and repeaters, cellular towers, power sustainability, and critical warning and communications systems) as well as providing feedback regarding anticipated resource needs.	Staff Time	F	F	F	F	F	F	F	9
F10. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	10
F11. Wildfire Education and Public Outreach	Wildfire	Both	Conduct regular public outreach events to disseminate information regarding fire risk and hazards, using flyers, pamphlets, and website notices.	Staff + $2,000/yr	F	F	F	F	F	F	F	11

Table 4-12-2
Mitigation actions/projects implementation strategy for Mesilla

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
F1. Upgrade/repair Mesilla Community Center to serve as Cooling/Heating Station	Currently being designed.	Jan 2013	Public Works / Director	CDBG awarded
F2. Rehabilitate/Repair Public Safety Building	Mechanical and Engineering studies completed	June 2015	Public Works / Director	AFG Grants, State Grants, State Loans
F3. Storm Drain Inspections and Repairs	Water Plan	FY 2016	Public Works / Director	Enterprise Funds, State Loans/Grants
F4. Implement the Life Safety Initiative "Turn Around Don't Drown"	N/A	FY 2014	Public Works / Director	General Fund
F5. Reduce Hazardous Material Dumping	N/A	ongoing	Codes Enforcement	General Fund
F6. County-Wide Flood Warning and Response System	N/A	Annually (per County schedule)	Public Works / Director	General Fund
F7. Drought Related Public Education and Outreach	N/A	Annually with County	Public Works / Director	General Fund
F8. Drought Resistant Landscape Regulation	Town Code	Ongoing as needed	Community Development / Coordinator	General Fund

Table 4-12-2
Mitigation actions/projects implementation strategy for Mesilla

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
F9. Assist Doña Ana County To Improve Emergency Communications County-Wide	N/A	Annually	Fire Department / Fire Chief	General Fund
F10. Defensible Space Practices	CWPP	Ongoing as needed	City of Las Cruces Fire Department / Fire Chief	General Fund
F11. Wildfire Education and Public Outreach	CWPP	Annually	City of Las Cruces Fire Department / Fire Chief	General Fund

Table 4-13-1
Mitigation actions/projects identified by NMSU

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
G1. Tunnel Assessment	Flood	Existing	Survey tunnel system to identify and correct critical vulnerabilities associated with the essential utilities	$250,000	F	F	F	F	F	L	N	1

Table 4-13-1
Mitigation actions/projects identified by NMSU

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
G2. Tortugas Dams Study	Flood, Dam Failure	Both	Perform preliminary hydrologic and hydraulic analysis of the Tortugas Dams in preparation for an external grant funding proposal. Graduate and Capstone design students will be involved.	$150,000	F	F	F	F	F	F	F	2
G3. Temperature Resistant Equipment	Extreme Cold	Both	Comprehensive insulation program for entire campus. Develop the plan in year one with implementation in years 2 through 5.	$50,000	F	F	F	F	F	F	F	3
G4. Drainage Master Plan And Flooding Detection/ Warning	Flood, Dam Failure	Both	Develop drainage master plan and install early detection and warning sump pump systems to prevent repeated flooding . This is implementation of NMSU Storm water plan.	$60,000	F	F	F	F	F	F	F	4
G5. Unified Mapping	Flood	Both	Consistent mapping for improved interoperability - identify critical assets and hazard areas.	$50,000	F	F	F	F	F	F	N	5
G6. Emergency Power To Shelter Facilities	Extreme Cold, Severe Wind	Existing	Upgrade distribution system to include critical facilities access to emergency power during hazard events that cause loss of main power.	$1,000,000	F	L	L	F	F	L	F	6

Table 4-13-1
Mitigation actions/projects identified by NMSU

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
G7. Generational Capacity	Extreme Cold, Severe Wind	Both	Seek external funding to increase power generation capacity to expand reach of essential bus for campus facilities when outside power system fails.	$5,000,000	F	F	L	F	F	F	F	7
G8. Land Use Planning	Wildfire	Both	Establish a land use planning process to regulate and ensure appropriate development in wildfire hazard areas. This is to mitigate the spread of wildfires into NMSU critical facilities and infrastructure.	Staff time	F	F	F	F	F	F	F	8
G9. CDRRC Wildfire Protection	Wildfire	Both	Create fire breaks around critical assets by clearing vegetative fuel at CDRRC	$2,500	F	F	F	F	F	F	F	9
G10. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county wide education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices and newsletter.	Staff Time	F	F	F	F	N	F	F	10
G11. Water Conservation Design Standards	Drought	Both	Develop and enforce design standards that incorporate sustainable landscape and building features that optimize and reduce water use, as appropriate and whenever possible, at NMSU owned facilities.	Staff Time	F	F	F	F	F	F	F	11

Table 4-13-2
Mitigation actions/projects implementation strategy for NMSU

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
G1. Tunnel Assessment	Long term funding plan	3 yr	Facilities & Services/Engineer	BRR funds
G2. Tortugas Dams Study	Dam breach analysis, inundation mapping, emergency action planning	3 yrs	Dept. of Civil Engineering/Assoc Dept Head	FEMA grant application
G3. Temperature Resistant Equipment	Long term funding plan	5 year	Facilities & Services/Exec. Director; Auxiliary Svcs /AVP	Operating budget and BRR funds
G4. Drainage Master Plan And Flooding Detection/ Warning	NMSU Stormwater management Program; Equipment maintenance	4 yrs	Facilities & Services/Engineer	BRR funds or operating budget
G5. Unified Mapping	Critical infrastructure in years 1 and 2. Years 3-5 expansion and cross utilization.	5 yrs	Facilities & Services /Information Manager	BRR funds or operating budget
G6. Emergency Power To Shelter Facilities	Long term funding plan	5 yrs	Facilities & Services/Engineer	BRR funding: $200K per year for the 5 year period
G7. Generational Capacity	Capital Improvement request or 3rd party power generator	3 yrs	Facilities & Services/AVP	Bond or third party power generation
G8. Land Use Planning	Chihuahuan Desert Rangeland Research Center steering committee	2 yrs	Head of the Department of Animal and Range Sciences	Operating budget

Table 4-13-2
Mitigation actions/projects implementation strategy for NMSU

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
G9. CDRRC Wildfire Protection	Staff duty	annual as needed	Agricultural Experiment Station/Farm Ranch Manager	Operating budget
G10. Drought Related Public Education and Outreach	N/A	Annually	Facilities & Services/ AVP	Operating Budget
G11. Water Conservation Design Standards	Regular building project review process	Ongoing as needed	Facilities & Services/ AVP	Operating Budget

Table 4-14-1
Mitigation actions/projects identified by Sunland Park

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
H1. Relocation of City Hall	Dam Failure, Flood	Existing	Locate, design and construct a new city hall to remove from high risk Dam Failure and Flood limits.	$2,500,000	F	F	F	F	F	N	N	1

Table 4-14-1
Mitigation actions/projects identified by Sunland Park

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
H2. County-Wide Flood Warning and Response System	Flood, Dam Failure	Both	Participate with Doña Ana County Flood Commission to develop a countywide Flood Warning and Response System, by providing localized feedback regarding potential locations for local gages and targeted populations to receive warnings.	Staff Time	F	F	F	F	F	F	F	2
H3. Drought Related Public Education and Outreach	Drought	Both	Participate with Doña Ana County to conduct a county-wide public education campaign to raise awareness of drought conditions and provide recommendations for ways to conserve water. Public contact may be accomplished through website notices, utility bill inserts, flyers and pamphlets.	Staff Time	F	F	F	F	F	F	F	3
H4. Drought Resistant Landscape Regulation	Drought	Both	Encourage and/or mandate the use of drought resistant landscaping , as appropriate, through ordinance development and/or enforcement.	Staff Time	N	F	F	N	N	F	F	4
H5. Building Code Review, Update and/or Adoption	Flood, Extreme Cold, Severe Wind	Both	Assess and review existing building codes, and implement necessary updates as needed to maintain current standards and compliance with State Law requirements	Staff Time	N	F	F	F	F	F	F	5

Table 4-14-1
Mitigation actions/projects identified by Sunland Park

Name	Hazard(s) Mitigated	Community Assets Mitigated (Existing/ Future/ Both)	Description	Estimated Cost	STAPLE+E Assessment (F) Favorable; (L) Less Favorable; (N) Neutral							Project Rank
					Social	Technical	Administrative	Political	Legal	Economic	Environmental	
H6. Assist Doña Ana County To Improve Emergency Communications County-Wide	Dam Failure, Extreme Cold, Flood, Severe Wind, Wildfire	Both	Work in cooperation with Doña Ana County to improve county-wide emergency communications and hazard event warning capacity. Provide assistance with identifying community specific resources (amateur radio operators, receivers and repeaters, cellular towers, power sustainability, and critical warning and communications systems) as well as providing feedback regarding anticipated resource needs.	Staff Time	F	F	F	F	F	F	F	6
H7. Pipe Freeze Assessment for City Owned Buildings	Extreme Cold	Existing	Perform an inspection and assessment of all City owned buildings to determine freeze and burst vulnerability of potable water lines at exposed locations. Assessment shall include the preparation of a proposal for ways to mitigate.	Staff Time	F	F	F	F	F	F	F	7
H8. Defensible Space Practices	Wildfire	Both	Recommend and implement defensible space, coupled with Firewise Communities practices, to reduce structural ignitability and to protect critical infrastructure within the wildland-urban interface areas.	Staff Time	N	F	F	F	F	F	N	8
H9. Waterline Insulation Program	Extreme Cold	Both	City will retrofit all exposed waterlines identified in A/P H7 for City-owned facilities, with insulation materials as recommended	$20,000	F	F	F	F	F	N	F	9

Table 4-14-2
Mitigation actions/projects implementation strategy for Sunland Park

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
H1. Relocation of City Hall	5-Year CIP	December 2017	Mayor's Office / Mayor; City Engineer / City Manager; Community Development Dept / Public Works	Grants; CIP; other sources
H2. County-Wide Flood Warning and Response System	N/A	Annually (per County schedule)	Community Development / Building Inspector	General Fund
H3. Drought Related Public Education and Outreach	N/A	Annually with County	Water Utilities / Director Community Development / Director	General Fund
H4. Drought Resistant Landscape Regulation	City Code	Ongoing as needed	Community Development / Building Inspector	General Fund
H5. Building Code Review, Update and/or Adoption	City Code	Annually	Community Development / Building Inspector	General Fund
H6. Assist Doña Ana County To Improve Emergency Communications County-Wide	N/A	Annually	Fire Department / Fire Chief Police Department / Police Chief	General Fund
H7. Pipe Freeze Assessment for City Owned Buildings	N/A	December 2017	Community Development / Building Inspector	General Fund

Table 4-14-2
Mitigation actions/projects implementation strategy for Sunland Park

Name	Planning Mechanism(s) for Implementation	Anticipated Completion Schedule	Primary Agency / Job Title Responsible for Implementation	Funding Source(s)
H8. Defensible Space Practices	CWPP	Ongoing as needed	Community Development / Building Inspector	General Fund
H9. Waterline Insulation Program	N/A	December 2018	Community Development / Building Inspector	General Fund

SECTION 5: PLAN MAINTENANCE PROCEDURES

According to the DMA 2000 requirements, each plan must define and document processes or mechanisms for maintaining, updating, and integrating the hazard mitigation plan within the established five-year planning cycle. Elements of this plan maintenance section include:

- **Monitoring and Evaluating the Plan**
- **Updating the Plan**
- **Continued Public Participation**

The following sections document the past and proposed plan maintenance and integration procedures discussed and defined by the Steering Committee.

5.1 Monitoring and Evaluation

5.1.1 Past Plan Cycle

Doña Ana County and the participating jurisdictions recognize that this hazard mitigation plan is intended to be a "living" document with regularly scheduled monitoring, evaluation, and updating. Section 1.2 of the 2004 Plan outlined a schedule of specific activities for annual evaluations of the 2004 Plan. A poll of the Steering Committee regarding the past execution of the plan maintenance strategy was taken and the following tasks were accomplished:

- The 2004 Plan was reviewed once during the last 5 years by county staff.
- Additional informal reviews were conducted by DAC Flood Commission.
- An informal review was performed during the 2010 update of the Doña Ana County EOP.

Reasons for the lack of review included:

- Staff turnover and lack continuity to original planning team.
- Lack of communicating plan maintenance responsibilities to successors during staff changes.
- Lack of outreach.

Recognizing the need for improvement, the Steering Committee discussed ways to make sure that the Plan review and maintenance process will occur over the next five years. The results of those discussions are outlined in the following sections.

5.1.2 Proposed Schedule and Scope

Having a multi-jurisdictional plan can aide in the plan monitoring and evaluation through the consolidation of information for all participating jurisdictions into one document. The Steering Committee reviewed the current DMA 2000 rules and October 2011 FEMA guidance document and discussed a strategy for performing the required monitoring and

evaluation of the Plan over the next Plan cycle. The monitoring and evaluation procedures resulting from those discussions are as follows:

- **Schedule** – The Steering Committee will meet in the first quarter of Plan years one (1) and three (3) to review and discuss the Plan. Additional meetings may be scheduled, if needed, to accommodate reviews following a major disaster or for some other reason.
- **Responsibility** – The Doña Ana County Flood Commission, in conjunction with the Doña Ana County Office of Emergency Management, will take responsibility for organizing and facilitating the review meetings. Steering Committee members, or there replacement, will be contacted via an invitation email/letter stating the meeting date and agenda. Invitations will be made one month in advance of the meeting date.
- **Review Content** – The content and scope of the above referenced Plan review and evaluation will address the following questions to be addressed by each participating jurisdiction:
    - ***Hazard Identification:*** *Have the risks and hazards changed?*
    - ***Goals and objectives:*** *Are the goals and objectives still able to address current and expected conditions?*
    - ***Mitigation Projects and Actions:*** *Has the project been completed? If not complete but started, what has been done and what percent of the project has been completed? What remains to be done? Are there changes to the scope of work?*
- **Documentation** – Each jurisdiction will review and evaluate the Plan as it relates to their community and document responses to the above questions in the form of an informal memorandum. During the scheduled review meeting, responses to each of the questions will be discussed by the Steering Committee to address concerns or successes. Documentation of each review meeting will include a list of attendees, a compilation of the memorandums generated by each jurisdiction, and any notes on discussions and conclusions made during the meeting, all compiled into a brief memorandum or review report. Copies of the review memorandum/report will be distributed to each jurisdiction for inclusion in Appendix G. The memorandums will also be posted to the County's website and a public notice article will be published in the Las Cruces Sun-News announcing the completion of the review and posting of the summary memorandums.

5.2 Plan Update

According to DMA 2000, the Plan requires updating and approval from the NMDHSEM and FEMA every five years. The plan updates will adhere to that set schedule using the following procedure:

- ✓ Approximately two years prior to the plan expiration date, the Steering Committee will research sources and secure funding to begin the plan update process.
- ✓ Approximately 18 months prior to the plan expiration date, the Steering Committee will be re-convened to begin the update process. The Doña Ana County Flood Commission, in conjunction with the Doña Ana County Office of Emergency Management will take responsibility to organize and facilitate the update effort.

- ✓ During the update, the Steering Committee will review and assess the materials accumulated in Appendix G, and update and/or revise the Plan in its entirety. The update planning process will result in a completely revised plan document.
- ✓ The revised plan will be submitted to NMDHSEM and FEMA for review, comment and the issuance of an "Approval Pending Adoption" (APA) letter from FEMA.
- ✓ The APA Plan document will be presented before the respective councils and boards for an official concurrence/adoption of the changes.
- ✓ Official copies of the resolutions will be sent to NMDHSEM and FEMA for the final approval.

Items or data needs that have been specifically identified during the development of this Plan that should be considered during the next update include:

- Incorporation of the Las Cruces Dam EAP information in the Dam Failure vulnerability analysis.

5.3 Continued Public Involvement

The Steering Committee reviewed Section 1.2 of the 2004 Plan (current Plan) and discussed the challenges and successes regarding the identified continued public involvement strategy. The 2004 Plan identified the following strategy for continued public involvement:

- During the first and subsequent annual evaluations of the 2004 Plan, public participation would be requested by printed announcement, posting the plan on the Doña Ana County and City of Las Cruces websites, and a public meeting.

A poll of the Steering Committee revealed that the 2004 Plan was posted to the City of Las Cruces and Doña Ana County websites, and a copy of the 2004 Plan was also made available to the public at the Branigan Public Library.

Several of the participating jurisdictions conducted other efforts to elevate hazard mitigation awareness in the general public and community on an ongoing basis over the past plan cycle, with varying degrees of success. Examples included:

- Public meetings with the release of the new DFIRM mapping.
- Public meetings with the development of the new county-wide Community Wildfire Protection Plan.
- Doña Ana County Flood Commission had a booth at the Southern New Mexico State Fair.
- Outreach at the Pan Am Basketball Game.
- LEPC monthly meetings – natural hazards brochure development and distribution.
- Post-Disaster actions (2004 and 2006 Flooding).
- Publicly attended Table Top exercises with the Doña Ana County Emergency Operations Plan update in 2010.
- Community Rating System outreach efforts by the City of Las Cruces and Doña Ana County.

All participating jurisdictions remain committed to keeping the public informed and aware about the hazard mitigation planning efforts, actions and projects and the plan maintenance activities. Table 5-1 summarizes proposed activities for continued public involvement and dissemination of information that shall be pursued whenever possible and appropriate during the next five years. The memorandums generated following the one and three year plan maintenance reviews discussed in Section 5.1.2 will be posted to the County's website and a public notice article will be published in a local newspaper alerting citizens to the plan maintenance activity and website. Copies of materials documenting or pertaining to these public involvement efforts will be kept during the next five years and archived in Appendix G for use in the next update process.

Table 5-1: Proposed continued public involvement activities or opportunities identified by Doña Ana County jurisdictions

Jurisdiction	Proposed Continued Public Involvement Activity or Opportunity
All Participating Jurisdictions	• Centralize posting of Plan to the Doña Ana County website with each participating jurisdiction providing a brief note and link to the county's website on their local website, as appropriate. • LEPC meetings – regular announcement of hazard mitigation information and availability of the Plan for review and reference. • Presentation of mitigation actions/projects as they are implemented, to boards, councils, and/or trustees, as appropriate. • The memorandums generated following the one and three year plan maintenance reviews discussed in Section 5.1.2 will be posted to the County's website and a public notice article will be published in the Las Cruces Sun-News announcing the completion of the review and posting of the summary memorandums.
Doña Ana County	• Provide a copy of Plan at fair booth or similar venues • CRS outreach efforts
City of Anthony	• Plan awareness through the Anthony Water and Sanitation District Fair.
Village of Hatch	• Perform community outreach and Plan awareness at the annual Chile Festival
City of Las Cruces	• Public service announcement on CLC TV • CRS outreach efforts
Town of Mesilla	• Present the completed Plan at a Town Hall Meeting

Table 5-1: Proposed continued public involvement activities or opportunities identified by Doña Ana County jurisdictions	
Jurisdiction	**Proposed Continued Public Involvement Activity or Opportunity**
City of Sunland Park	• Provide a copy of the Plan at the Sunland Park Community Library for public review and comment.
Elephant Butte Irrigation District	• Community outreach using the water trailer • Provide website connections to weather data
New Mexico State University	• Coordination of Plan awareness amongst NMSU departments

Appendix A

Acronyms and Definitions

A.1 Acronyms

A/P ..... Mitigation Action/Project
ALOHA ..... Areal Location of Hazardous Atmospheres model
ASCE ..... American Society of Civil Engineers
BLM ..... Bureau of Land Management
CAMEO ..... Computer Aided Management of Emergency Operations model
CAP ..... Community Assistance Program
CAV ..... Community Assistance Visits
CLIMAS..... Climate Assessment for the Southwest
CFI ..... Critical Facilities and Infrastructure
CFR ..... Code of Federal Regulations
CPRI..... Calculated Priority Risk Index
CRS ..... Community Rating System
CWPP ..... Community Wildfire Protection Plan
DACOEM..... Doña Ana County Office of Emergency Management
DACFC..... Doña Ana County Flood Commission
DFIRM ..... Digital Flood Insurance Rate Map
DMA 2000 ..... Disaster Mitigation Act of 2000
DOD ..... Department of Defense
DOT ..... Department of Transportation
EBID ..... Elephant Butte Irrigation District
EAP..... Emergency Action Plan
EHS ..... Extremely Hazardous Substance
EOP ..... Emergency Operations Plan
EPA ..... Environmental Protection Agency
EPCRA ..... Emergency Planning and Community Right to Know Act
ETZ ..... Extra-Territorial Zone
FEMA ..... Federal Emergency Management Agency
FIRM ..... Flood Insurance Rate Map
FMA ..... Flood Mitigation Assistance Grant Program
GIS ..... Geographic Information System
HAZMAT ..... Hazardous Material
HAZUS-MH ..... Hazards United States Multi-Hazard
HMGP ..... Hazard Mitigation Grant Program
IFCI ..... International Fire Code Institute
ISO ..... Insurance Services Office
LEPC ..... Local Emergency Planning Committee
MJHMP ..... Multi-Jurisdictional Hazard Mitigation Plan
MMI ..... Modified Mercalli Intensity
MPO..... Metropolitan Planning Organization
MSA ..... Metropolitan Statistical Area
MVEDA..... Mesilla Valley Economic Development Alliance
NCDC ..... National Climate Data Center
NDMC ..... National Drought Mitigation Center
NESDIS ..... National Environmental Satellite, Data and Information Service

NFIP ..... National Flood Insurance Program
NFPA ..... National Fire Protection Association
NHC ..... National Hurricane Center
NIBS ..... National Institute of Building Services
NID ..... National Inventory of Dams
NIST ..... National Institute of Standards and Technology
NMDHSEM..... New Mexico Department of Homeland Security & Emergency Management
NMDTF..... New Mexico Drought Task Force
NMEMNRD ..... New Mexico Energy, Minerals, and Natural Resources Department
NMSU..... New Mexico State University
NOAA ..... National Oceanic and Atmospheric Administration
NRC ..... National Response Center
NSF ..... National Science Foundation
NWCG ..... National Wildfire Coordination Group
NWS ..... National Weather Service
OSEDSB ..... New Mexico Office of the State Engineer Dam Safety Bureau
OEM ..... Office of Emergency Management
OVOV 2040 ..... One Valley One Vision 2040 Regional Plan
PDM ..... Pre-Disaster Mitigation Grant
PSDI ..... Palmer Drought Severity Index
RL ..... Repetitive Loss
SARA ..... Superfund Amendments and Reauthorization Act
SFHA ..... Special Flood Hazard Area
SRLP ..... Severe Repetitive Loss Properties
SRL ..... Severe Repetitive Loss
TPC..... Threshold Planning Quantity
UBC ..... Uniform Building Code
USACE ..... United States Army Corps of Engineers
USBR ..... United States Bureau of Reclamation
USDA ..... United States Department of Agriculture
USFS ..... United States Forest Service
USGS ..... United States Geological Survey
VA ..... Vulnerability Analysis
WUI ..... Wildland Urban Interface

A.2 Definitions

The following terms and definitions are provided for reference.

HAZARDS

Dam Failure

A dam failure is a catastrophic type of failure characterized by the sudden, rapid and uncontrolled release of impounded water. Dam failures are typically due to either overtopping or piping and can result from a variety of causes including natural events such as floods, landslides or earthquakes, deterioration of foundation or compositional materials, penetration by vegetative roots or animal burrows, fissures or improper design and construction. Such a failure presents a significant potential for a disaster as significant loss of life and property would be expected in addition to the possible loss of power and water resources.

Drought

A drought is a deficiency of precipitation over on extended period of time, resulting in water shortage for some activity, group or environmental sector. "Severe" to "extreme" drought conditions endanger livestock and crops, significantly reduce surface and ground water supplies, increase the potential risk for wildland fires, increase the potential for dust storms, and cause significant economic loss. Humid areas are more vulnerable than arid areas. Drought may not be constant or predictable and does not begin or end on any schedule. Short term droughts are less impacting due to the reliance on irrigation and groundwater in arid environments.

Earthquake

An earthquake is a naturally-induced shaking of the ground, caused by the fracture and sliding of rock within the Earth's crust. The magnitude is determined by the dimensions of the rupturing fracture (fault) and the amount of displacement that takes place. The larger the fault surface and displacement, the greater the energy. In addition to deforming the rock near the fault, this energy produces the shaking and a variety of seismic waves that radiate throughout the Earth. Earthquake magnitude is measured using the Richter Scale and earthquake intensity is measured using the Modified Mercalli Intensity Scale.

Fissure

Earth fissures are tension cracks that open as the result of subsidence due to severe overdrafts (i.e., pumping) of groundwater, and occur about the margins of alluvial basins, near exposed or shallow buried bedrock, or over zones of differential land subsidence. As the ground slowly settles, cracks form at depth and propagate towards the surface, hundreds of feet above. Individual fissures range in length from hundreds of feet to several miles, and from less than an inch to several feet wide. Rainstorms can erode fissure walls rapidly causing them to widen and lengthen suddenly and dangerously, forming gullies five to 15- feet wide and tens of feet deep.

Flooding

Flooding is an overflowing of water onto normally dry land and is one of the most significant and costly of natural disasters. Flooding tends to occur in New Mexico during anomalous years of prolonged, regional rainfall (typical of an El Nino year), and is typified by increased humidity and high summer temperatures.

Flash flooding is caused excessive rain falling in a small area in a short time. Flash floods are usually associated with summer monsoon thunderstorms or the remnants of a tropical storm. Factors contributing to flash flooding include: rainfall intensity and duration, topography, soil conditions, and ground cover. Most flash flooding is caused by slow-moving thunderstorms or thunderstorms repeatedly moving over the same area and can occur within a few minutes or hours of excessive rainfall, or a quick release from a dam or levee failure. Thunderstorms produce flash flooding, often far from the actual storm and at night when natural warnings may not be noticed.

Landslide / Mudslide

Landslides like avalanches are massive downward and outward movements of slope-forming materials. The term landslide is restricted to movement of rock and soil and includes a broad range of velocities. Slow movements, although rarely a threat to life, can destroy buildings or break buried utility lines. A landslide occurs when a portion of a hill slope becomes too weak to support its own weight. The weakness is generally initiated when rainfall or some other source of water increases the water content of the slope, reducing the shear strength of the materials. A mud slide is a type of landslide referred to as a flow. Flows are landslides that behave like fluids: mud flows involve wet mud and debris.

Levee Failure / Breach

Levee failures are typically due to either overtopping or erosive piping and can result from a variety of causes including natural events such as floods, hurricane/tropical storms, or earthquakes, deterioration of foundation or compositional materials, penetration by vegetative roots or animal burrows, fissures, or improper design, construction and maintenance. A levee breach is the opening formed by the erosion of levee material and can form suddenly or gradually depending on the hydraulic conditions at the time of failure and the type of material comprising the levee.

Thunderstorms

Thunderstorms are characterized as violent storms that typically are associated with high winds, dust storms, heavy rainfall, hail, lightning strikes, and/or tornadoes. The unpredictability of thunderstorms, particularly their formation and rapid movement to new locations heightens the possibility of floods. Thunderstorms, dust/sand storms and the like are most prevalent during the monsoon season, which is a seasonal shift in the winds that causes an increase in humidity capable of fueling thunderstorms. The monsoon season typically is from late-June or early-July through mid-September.

Tornadoes

Tornadoes are violently rotating columns of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of tremendous destruction with wind speeds in excess of 250 mph. Damage paths can exceed a mile wide and 50 miles long. The damage from tornadoes is due to high winds. The Fujita Scale of Tornado Intensity measures tornado / high wind intensity and damage.

Tropical Storms/Hurricanes

Tropical Storms are storms in which the maximum sustained surface wind ranges from 39-73 mph. Tropical storms are associated with heavy rain and high winds. High intensity rainfall in short periods is typical. A tropical storm is classified as a hurricane when its sustained winds reach or exceed 74 mph. These storms are medium to large in size and are capable of producing dangerous winds, torrential rains, and flooding, all of which may result in tremendous property damage and loss of

life, primarily in coastal populated areas. The effects are typically most dangerous before a hurricane makes landfall, when most damage occurs.

Subsidence

Land subsidence in New Mexico is primarily attributed to substantial groundwater withdrawal from aquifers in sedimentary basins. As the water is removed, the sedimentary layers consolidate resulting in a general lowering of the corresponding ground surface. Subsidence frequently results in regional bowl-shaped depressions, with loss of elevation greatest in the center and decreasing towards the perimeter. Subsidence can measurably change or reverse basin gradients causing expensive localized flooding and adverse impacts or even rupture to long-baseline infrastructure such as canals, sewer systems, gas lines and roads. Earth fissures are the most spectacular and destructive manifestation of subsidence-related phenomena.

Wildfire

Wildfire is a rapid, persistent chemical reaction that releases heat and light, especially the exothermic combination of a combustible substance with oxygen. Wildfires present a significant potential for disaster in the southwest, a region of relatively high temperatures, low humidity, low precipitation, and during the spring moderately strong daytime winds. Combine these severe burning conditions with people or lightning and the stage is set for the occurrence of large, destructive wildfires.

Winter Storm

Winter storms bring heavy snowfall and frequently have freezing rain and sleet. Sleet is defined as pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes. These pellets of ice usually bounce after hitting the ground or other hard surfaces. Freezing rain begins as snow at higher altitudes and melts completely on its way down while passing through a layer of air above freezing temperature, then encounters a layer below freezing at lower level to become supercooled, freezing upon impact of any object it then encounters. Because freeing rain hits the ground as a rain droplet, it conforms to the shape of the ground, making one thick layer of ice. Snow is generally formed directly from the freezing of airborne water vapor into ice crystals that often agglomerates into snowflakes. Average annual snowfall varies with geographic location and elevation, and can range from trace amounts to hundreds of inches. Severe snow storms can affect transportation, emergency services, utilities, agriculture and basic subsistence supply to isolated communities. In extreme cases, snowloads can cause significant structural damage to under-designed buildings.

GENERAL PLAN TERMS

Asset
Any natural or human-caused feature that has value, including, but not limited to people; buildings; infrastructure like bridges, roads, and sewer and water systems; lifelines like electricity and communication resources; or environmental, cultural, or recreational features like parks, dunes, wetlands, or landmarks.

Building
A structure that is walled and roofed, principally above ground and permanently affixed to a site. The term includes a manufactured home on a permanent foundation on which the wheels and axles carry no weight.

Critical Facilities and Infrastructure
Systems or facilities whose incapacity or destruction would have a debilitating impact on the defense or economic security of the nation. The Critical Infrastructure Assurance Office (CIAO) defines eight categories of critical infrastructure, as follows:

Telecommunications infrastructure: Telephone, data services, and Internet communications, which have become essential to continuity of business, industry, government, and military operations.

Electrical power systems: Generation stations and transmission and distribution networks that create and supply electricity to end-users.

Gas and oil facilities: Production and holding facilities for natural gas, crude and refined petroleum, and petroleum-derived fuels, as well as the refining and processing facilities for these fuels.

Banking and finance institutions: Banks, financial service companies, payment systems, investment companies, and securities/commodities exchanges.

Transportation networks: Highways, railroads, ports and inland waterways, pipelines, and airports and airways that facilitate the efficient movement of goods and people.

Water supply systems: Sources of water; reservoirs and holding facilities; aqueducts and other transport systems; filtration, cleaning, and treatment systems; pipelines; cooling systems; and other delivery mechanisms that provide for domestic and industrial applications, including systems for dealing with water runoff, wastewater, and firefighting.

Government services: Capabilities at the federal, state, and local levels of government required to meet the needs for essential services to the public.

Emergency services: Medical, police, fire, and rescue systems.

Disaster Mitigation Act of 2000 (DMA2K)
A law signed by the President on October 30, 2000 that encourages and rewards local and state pre-disaster planning, promotes sustainability as a strategy for disaster resistance, and is intended to integrate state and local planning with the aim of strengthening statewide mitigation planning.

Emergency Preparedness and Response (EPR) Directorate
One of five major Department of Homeland Security Directorates which builds upon the formerly independent Federal Emergency Management Agency (FEMA). EPR is responsible for preparing for natural and human-caused disasters through a comprehensive, risk-based emergency management program of preparedness, prevention, response, and recovery. This work incorporates the concept of disaster-resistant communities, including providing federal support for local governments that promote structures and communities that reduce the chances of being hit by disasters.

Emergency Response Plan
A document that contains information on the actions that may be taken by a governmental jurisdiction to protect people and property before, during, and after a disaster.

Federal Emergency Management Agency (FEMA)
Formerly independent agency created in 1978 to provide a single point of accountability for all Federal activities related to disaster mitigation and emergency preparedness, response and recovery. As of March 2003, FEMA is a part of the Department of Homeland Security's Emergency Preparedness and Response (EPR) Directorate.

Flood Insurance Rate Map (FIRM)
Map of a community, prepared by FEMA that shows the special flood hazard areas and the risk premium zones applicable to the community.

Frequency
A measure of how often events of a particular magnitude are expected to occur. Frequency describes how often a hazard of a specific magnitude, duration, and/or extent typically occurs, on average. Statistically, a hazard with a 100-year recurrence interval is expected to occur once every 100 years on average, and would have a 1% chance – its probability – of happening in any given year. The reliability of this information varies depending on the kind of hazard being considered.

Geographic Information Systems (GIS)
A computer software application that relates physical features on the earth to a database to be used for mapping and analysis.

Hazard
A source of potential danger or adverse condition. Hazards include both natural and human-caused events. A natural event is a hazard when it has the potential to harm people or property and may include events such as floods, earthquakes, tornadoes, tsunami, coastal storms, landslides, and wildfires that strike populated areas. Human-caused hazard events originate from human activity and may include technological hazards and terrorism. Technological hazards arise from human activities and are assumed to be accidental and/or have unintended consequences (e.g., manufacture, storage and use of hazardous materials). While no single definition of terrorism exists, the Code of Federal Regulations defines terrorism as "...unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."

Hazard Event
A specific occurrence of a particular type of hazard.

Hazard Identification
The process of identifying hazards that threaten an area.

Hazard Mitigation
Cost effective measures taken to reduce or eliminate long-term risk associated with hazards and their effects.

Hazard Profile
A description of the physical characteristics of hazards and a determination of various descriptors including magnitude, duration, frequency, probability, and extent.

HAZUS
A GIS-based nationally standardized earthquake, flood and high wind event loss estimation tool developed by FEMA.

Mitigate
To cause to become less harsh or hostile; to make less severe or painful. Mitigation activities are actions taken to eliminate or reduce the probability of the event, or reduce its severity of consequences, either prior to or following a disaster/emergency.

Mitigation Plan
A systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards typically present in a defined geographic area, including a description of actions to minimize future vulnerability to hazards.

100-Hundred Year Floodplain
Also referred to as the Base Flood Elevation (BFE) and Special Flood Hazard Area (SFHA). An area within a floodplain having a 1% or greater chance of flood occurrence in any given year.

Planning
The act or process of making or carrying out plans; the establishment of goals, policies, and procedures for a social or economic unit.

Probability
A statistical measure of the likelihood that a hazard event will occur.

Promulgation
To make public and put into action the Hazard Mitigation Plan via formal adoption and/or approval by the governing body of the respective community or jurisdiction (i.e. – Town or City Council, County Board of Directors, etc.).

Q3 Data
The Q3 Flood Data product is a digital representation of certain features of FEMA's Flood Insurance Rate Map (FIRM) product, intended for use with desktop mapping and Geographic Information Systems technology. The digital Q3 Flood Data are created by scanning the effective FIRM paper maps and digitizing selected features and lines. The digital Q3 Flood Data are designed to serve FEMA's needs for disaster response activities, National Flood Insurance Program activities, risk assessment, and floodplain management.

Repetitive Loss Property
A property that is currently insured for which two or more National Flood Insurance Program losses (occurring more than ten days apart) of at least $1,000 each have been paid within any 10 year period since 1978.

Risk
The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage beyond a particular threshold due to a specific type of hazard event. It also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

Substantial Damage
Damage of any origin sustained by a structure in a Special Flood Hazard Area whereby the cost of restoring the structure to its before-damaged condition would equal or exceeds 50% of the market value of the structure before the damage.

Vulnerability
Describes how exposed or susceptible to damage an asset is. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. Like indirect damages, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power–if an electric substation is flooded, it will affect not only the substation itself, but a number of businesses as well. Often, indirect effects can be much more widespread and damaging than direct effects.

Vulnerability Analysis
The extent of injury and damage that may result from a hazard event of a given intensity in a given area. The vulnerability analysis should address impacts of hazard events on the existing and future built environment.

Vulnerable Populations
Any segment of the population that is more vulnerable to the effects of hazards because of things such as lack of mobility, sensitivity to environmental factors, or physical abilities. These populations can include, but are not limited to, senior citizens and school children.

Goals
General guidelines that explain what you want to achieve. Goals are usually broad statements with long-term perspective.

Objectives
Defined strategies or implementation steps intended to attain the identified goals. Objectives are specific, measurable, and have a defined time horizon.

Actions/Projects
Specific actions or projects that help achieve goals and objectives.

Implementation Strategy
A comprehensive strategy that describes how the mitigation actions will be implemented.

GENERAL HAZARD TERMS

Fujita Scale of Tornado Intensity
Rates tornadoes with numeric values from F0 to F5 based on tornado winds peed and damage sustained. An F0 indicates minimal damage such as broken tree limbs or signs, while an F5 indicates severe damage sustained.

Liquefaction
The phenomenon that occurs when ground shaking (earthquake) causes loose soils to lose strength and act like viscous fluid. Liquefaction causes two types of ground failure: lateral spread and loss of bearing strength.

Modified Mercalli Intensity Scale
The Modified Mercalli Intensity Scale is commonly used in the United States by seismologists seeking information on the severity of earthquake effects. Intensity ratings are expressed as Roman numerals between I at the low end and XII at the high end. The Intensity Scale differs from the Richter Magnitude Scale in that the effects of any one earthquake vary greatly from place to place, so there may be many Intensity values (e.g.: IV, VII) measured from one earthquake. Each earthquake, on the other hand, should have just one Magnitude, although the several methods of estimating it will yield slightly different values (e.g.: 6.1, 6.3).

Monsoon
A monsoon is any wind that reverses its direction seasonally. In the Southwestern U.S., for most of the year the winds blow from the west/northwest. During the summer months, the Mexican Monsoon turns the winds to a more south/southeast direction and brings moisture from the Pacific Ocean, Gulf of California, and Gulf of Mexico. This moisture often leads to thunderstorms in the higher mountains, with air cooled from these storms often moving from the high country to the deserts, leading to further thunderstorm activity in the desert. A common misuse of the term monsoon is to refer to individual thunderstorms as monsoons.

Richter Magnitude Scale
A logarithmic scale devised by seismologist C.F. Richter in 1935 to express the total amount of energy released by an earthquake. While the scale has no upper limit, values are typically between 1 and 9, and each increase of 1 represents a 32-fold increase in released energy.

Appendix B

CRS Correlation Table

OMB No. 1660-0022
Expires: August 31, 2010

Community : _____

510 FLOODPLAIN MANAGEMENT PLANNING

511.a Floodplain Management Planning (FMP)

Credit Points: *Enter the section or page number in the plan where each credited item can be found.*

CRS Step	Section/Page	Score	Step Total
1. Organize to prepare the plan.			
a. Supervision or direction of a professional planner (2)			
b. Planning committee of department staff (6)			
c. Process formally created by the community's governing board (2)			
2. Involve the public.			
a. Planning process conducted through a planning committee (40)			
b. Public meetings held at the beginning of the planning process (15)			
c. Public meeting held on draft plan (15)			
d. Questionnaires ask the public for information (5)			
e. Recommendations are solicited from advisory groups, etc. (5)			
f. Other public information activities to encourage input (5)			
3. Coordinate with other agencies.			
a. Review of existing studies and plans (REQUIRED) (3)			
b. Invited neighboring communities and other agencies (REQUIRED) (1)			
c. Contacted communities and NFIP and EM agencies (4)			
d. NWS, ARC and others are asked how they can help community (4)			
e. Meetings are held with agencies on mitigation strategies (10)			
f. Draft action plan sent to agencies for comments (3)			
4. Assess the hazard.			
a. Plan includes an assessment of the flood hazard (REQUIRED) with:			
(1) A map of known flood hazards (5)			
(2) A description of known flood hazard (5)			
(3) A discussion of past floods (5)			
b. The plan describes other natural hazards (REQUIRED FOR DMA) (5)			

Item

Community : _____

CRS Step	Section/Page	Score	Total
5. Assess the problem.			
a. Summary of each hazard identified in the hazard assessment and their community impact (REQUIRED) (2)			
b. Description of the impact of the hazards on:			
(1) Life, safety, health, procedures for warning and evacuation (5)			
(2) Critical facilities and infrastructure (5)			
(3) The community's economy and tax base (5)			
c. Number and types of buildings subject to the hazards (5)			
d. Review of all flood insurance claims (4)			
e. Natural and beneficial functions (4)			
Development, redevelopment, and population trends (5)			
f.			
6. Set goals. (REQUIRED) (2)			
7. Review possible activities.			
a. Preventive activities (5)			
b. Property protection activities (5)			
c. Natural resource protection activities (5)			
d. Emergency services activities (5)			
e. Structural projects (5)			
f . Public information activities (5)			
8. Draft an action plan.			
Actions must be prioritized (REQUIRED)			
a. Recommendations for activities from two of the six categories (10)			
b. Recommendations for activities from three of the six categories (20)			
c. Recommendations for activities from four of the six categories (30)			
d. Recommendations for activities from five of the six categories (45)			
e. Post-disaster mitigation policies and procedures (10)			
f . Recommendations from Habitat Conservation Plan (10)			
g. Action items for mitigation of other hazards (5)			

Community : _____

CRS Step	Section/Page	Score	Total
9. Adopt the plan. (2)			
10. Implement, evaluate, and revise.			
a. Procedures to monitor and recommend revisions (REQUIRED) (2)			
b. Same planning committee or successor committee that qualifies under Section 511.a.2(a) does the evaluation (13)			
Add the totals for steps 1 through 10 above:			

514 Credit Documentation:

___ a. FMP: The completed CRS activity worksheet (AW-510-1–510-3) or the mitigation plan review crosswalk.

___ b. A copy of the floodplain management plan, hazard mitigation plan, and/or Habitat Conservation Plan.

___ c. Documentation showing how the public was involved in preparing or reviewing the plan, including a copy of the notice(s) advising residents about the public meeting(s) held pursuant to steps 2(b) and (c), and a record of the meeting(s).

___ d. Copies of correspondence, meeting notes, or other materials that document the coordination with other municipalities, agencies, and organizations credited under Sections 511.a.3(b) – (f).

___ e. Documentation showing that the plan was adopted by the community's governing board.

The following will be needed at the annual recertification:

___ g. An annual report on evaluating progress toward implementing the action plan's objectives.

The following will be needed at least every five years:

___ h. An update to the floodplain management or hazard mitigation plan.

Appendix C

Steering Committee Meeting Documentation

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Orlando V. Fierro	Dona Ana County Flood Commission Office	575-525-5558	orlandof@donaanacounty.org
Paul Dugie	Dona Ana County Flood Commission Office	575-525-5558	pauld@donaanacounty.org
John Gwynne	Dona Ana County Flood Commission Office	575-525-5558	johngw@donaanacounty.org
Michael Villa	Office of Emergency Management	575-647-7901	michaelv@donaanacounty.org
David Almaguer	Office of Emergency Management	575-647-7901	davidal@donaanacounty.org
Daniel Hortert	Dona Ana County Community Development-Planning Department	575-525-6113	danielho@donaanacounty.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Delyce Maciel	Elephant Butte Irrigation District (EBID)	575-526-6671 x411 office	dmaciel@ebid-nm.org
Lorenzo Espinoza	NM Dept of Homeland Security and Emergency Management		Lorenzo.Espinoza@state.nm.us
J.D. Padilla	City of Las Cruces Floodplain Administrator	575-528-3131	jdpadilla@las-cruces.org
Edward F. Martella	Tectonic Engineering & Surveying Consultants P.C.	804-217-8504	EFMartella@tectonicengineering.com
David Cappelli	Tectonic Engineering & Surveying Consultants P.C.		DCappelli@tectonicengineering.com
Glen Haubold	NMSU Assistant VP for Facilities & Services		ghaubold@ad.nmsu.edu

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
W. Scott Ogden	JE Fuller/Hydrology & Geomorphology, Inc.		scott@jefuller.com
Mayor Nora L. Barraza	Town of Mesilla	575-524-3262	noralbarraza@comcast.net
Nick Eckert	Town of Mesilla	575-524-3262	nickeckert@comcast.net
Mayor Judd Nordyke	Village of Hatch	575-267-5216	mayor@villageofhatch.org
Jim Schoonover	Village of Hatch	575-267-5216	clerkadmin@villageofhatch.org
Dwaine Solana	City of Sunland Park	575-589-6912	dsolana@cityofsunlandpark-nm.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Linda Vazquez	City of Sunland Park	575-589-3631	lvazquez@cityofsunlandpark-nm.org
Patrick Lopez	Elephant Butte Irrigation District (EBID)	575-526-6671	patlopez@ebid-nm.org
Katrina Doolittle	NMSU Dir for Env Health & Safety	575-646-3327	kadoolit@ad.nmsu.edu
Chris Brown	NMSU Dept Head for Geography & Dir for Spatial Apps Research Center		
Raymond Carr	NMSU GIS Analyst Dept of Geography		
Roger Hedrick	Dona Ana County Community Development-Planning Department		rogerh@donaanacounty.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Diana Murillo	City of Anthony, New Mexico	915-538-8798	diana_murillo@rocketmail.com
Gloria Irigoyen	City of Anthony, New Mexico	575-882-2983	girigoyen62@q.com
Debbie Lujan	Town of Mesilla	575-524-3262	dlujan@comcast.net
Susan Walker	NM Department of Homeland Security and Emergency Management (NMDHSEM)	505-476-9640	susan.walker@state.nm.us
Bill Borthwick	State of New Mexico Floodplain Coordinator with the NMDHSEM	505-476-9617	william.borthwick@state.nm.us
Mary Lover	FEMA Hazard Mitigation Planning Specialist	940-783-3022	Mary.lover@dhs.gov

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Delia Cervantes	Office of Emergency Management		deliac@donaanacounty.org
Gary Esslinger	Elephant Butte Irrigation District	575-526-6671	gesslinger@ebid-nm.org
Kevin Hoban	Town of Mesilla	575-524-3262	kevinhoban@msn.com
Police Chief	Village of Hatch	575-267-5216	policechief@villageofhatch.org
Tiffany Bloom	South Central Council of Governments	575-524-3262 x110	tibloom@sccog-nm.com
Chuck McMahon	Dona Ana County Community Development-Planning Director	575-525-6129	chuckm@donaanacounty.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, and City of Anthony ALL HAZARDS MITIGATION PLAN			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
The **Public** who have been invited via the **Las Cruces Sun-News Paper**. Ad appeared in the Classified Section as well as an ad in the General Circulation-Local Section.	Public	N/A	Las Cruces Sun-News Paper posting on Friday, January 6, 2012 and Sunday, January 8, 2012
The **Public** who have been invited via the **Website Posting** on Jurisdictional Websites'.	Public	N/A	**Website readers** who view our Mitigation Efforts through each Jurisdictional website posting, have every opportunity to attend as well as find out additional information pursuant to the website contact information.

Orlando Fierro

To: nickeckert@comcast.net; Delyce Maciel; Katrina Doolittle; plopez@ebid-nm.org; David Almaguer; dsolana@cityofsunlandpark-nm.org; J.D. Padilla; mayor@villageofhatch.org; Michael Villa; gnorvell@ebid-nm.org; noralbarraza@comcast.net; clerkadmin@villageofhatch.org; ~~policechief@villageofhatch.org;~~ Espinoza, Lorenzo, DHSEM; Walker, Susan, DHSEM; tibloom@sccog-nm.com

Cc: Lover, Mary; william.borthwick@state.nm.us; John Gwynne; Paul Dugie; Gary Esslinger; Daniel Hortert; Chuck McMahon; Roger Hedrick

Subject: Kick Off Meeting for the All Hazards Mitigation Plan;

Importance: High

Greetings.

The time has finally arrived to have our **Kick-Off meeting** for the **ALL HAZARDS MITIGATION PLAN (Plan).**

The contractor who will compile and write our Plan is **Tectonic Engineering and Surveying Consultants, PC.** They will be coming to Las Cruces for the Kick-Off meeting.

At this time, I am proposing a meeting date and time of: Tuesday, December 13, 2011 at 9:30 a.m.

The meeting will be held at the Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.

The agenda for our initial meeting is to set up timelines and procedures for writing our PLAN. So, it is imperative that you attend, and if you are unable to attend, please send a representative from your agency/department. If I failed to include someone with this email, I apologize and ask that you share this email and its content with your key personnel/management personnel.

Finally, I will be sending periodic reminders as the meeting date gets closer.

Thank you.

Orlando V. Fierro, CFM
Dona Ana County Flood Commission
575-525-5566 direct line
575-525-5558 main line

Orlando Fierro

Subject:	Kickoff Meeting for ALL HAZARDS MITIGATION PLAN
Location:	Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico
Start:	Tue 12/13/2011 10:00 AM
End:	Tue 12/13/2011 12:00 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Orlando Fierro
Required Attendees:	NORALBARRAZA; nickeckert@comcast.net; mayor@villageofhatch.org; clerkadmin@villageofhatch.org; J.D. Padilla; dso:ana@cityofsunlandpark-nm.org; Katrina Doolittle; David Almaguer; Michael Villa; Martella, Edward F.; Delyce Maciel; gnorvell@ebid-nm.org; plopez@ebid-nm.org; Daniel Hortert; Roger Hedrick; Walker, Susan, DHSEM; Borthwick, William, DHSEM; Lover, Mary; Gary Esslinger; John Gwynne; Paul Dugie; Orlando Fierro; Espinoza, Lorenzo, DHSEM

Greetings.

Next week is our kickoff meeting for the **All Hazards Mitigation Plan.**

It is scheduled for **Tuesday, December 13, 2011** at **10:00 a.m.**

It will be held at the **Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.**

Please make every effort to attend. If you are unable to attend, please send a representative.

If I failed to include someone with this invitation, I apologize, and request you share this information and its content with your key personnel and management staff.

Thank you.

Orlando V. Fierro, CFM
Dona Ana County Flood Commission
575-525-5566 direct line
575-525-5558 main line

Orlando Fierro

From: Walker, Susan, DHSEM [susan.walker@state.nm.us]
Sent: Thursday, November 03, 2011 3:06 PM
To: Orlando Fierro
Subject: RE: Kick Off Meeting for the All Hazards Mitigation Plan;

Hopefully will have mitigation officer hired before December but I have it on my calendar and will be there. Thanks

Susan Walker
505-476-9640 Desk
505-690-2340 Cellular

From: Orlando Fierro [mailto:orlandof@donaanacounty.org]
Sent: Thursday, November 03, 2011 12:05 PM
To: 'nickeckert@comcast.net'; Delyce Maciel; Katrina Doolittle; plopez@ebid-nm.org; David Almaguer; 'dsolana@cityofsunlandpark-nm.org'; J.D. Padilla; 'mayor@villageofhatch.org'; Michael Villa; Norvell, Gayle; noralbarraza@comcast.net; clerkadmin@villageofhatch.org; policechief@villageofhatch.org; Espinoza, Lorenzo, DHSEM; Walker, Susan, DHSEM; tibloom@sccog-nm.com
Cc: Lover, Mary; Borthwick, William, DHSEM; John Gwynne; Paul Dugie; Gary Esslinger; Daniel Hortert; Chuck McMahon; Roger Hedrick
Subject: Kick Off Meeting for the All Hazards Mitigation Plan;
Importance: High

Greetings.

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At this time, I am proposing a meeting date and time of: Tuesday, December 13, 2011 at 9:30 a.m.

The meeting will be held at the Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.

The agenda for our initial meeting is to set up timelines and procedures for writing our PLAN. So, it is imperative that you attend, and if you are unable to attend, please send a representative from your agency/department. If I failed to include someone with this email, I apologize and ask that you share this email and its content with your key personnel/management personnel.

Finally, I will be sending periodic reminders as the meeting date gets closer.

Thank you.

Orlando V. Fierro, CFM
Dona Ana County Flood Commission
Las Cruces, New Mexico
575-525-5566 direct line
575-525-5558 main line

Orlando Fierro

From: Katrina Doolittle [kadoolit@ad.nmsu.edu]
Sent: Monday, September 19, 2011 3:47 PM
To: Orlando Fierro
Cc: Katrina Doolittle
Subject: ALI Hazard mitigation planning

Hello Orlando,
Thank you for speaking with me today about the current effort to update the Dona Ana County All Hazards Mitigation Plan. I would like to be included in your kick-off meeting to learn how NMSU might participate in the county planning. We currently have an All Hazards Emergency Operations plan and want to build upon our plan with disaster mitigation planning that will include standardized mapping and flood vulnerability studies for the Las Cruces campuses. We have GIS resources in our Department of Geography that might be of interest to the mitigation planning.

My role (among others) is to assist in emergency preparedness and disaster mitigation planning and this is a collaborative effort here at NMSU. Please let me know that you've received this correspondence. Thanks,

Have a safe and sustainable day!
Katrina

Katrina Doolittle, Ph.D.
Director for Environmental Health & Safety
PO Box 30001/ MSC 3578
Las Cruces, NM 88003
Phone (575) 646-3327
Fax (575) 646-7898
http://safety.nmsu.edu

Orlando Fierro

From: Orlando Fierro
Sent: Friday, September 02, 2011 12:19 PM
To: Michael Villa; David Almaguer; 'mayor@villageofhatch.org'; 'dsolana@cityofsunlandpark-nm.org'; 'J.D. Padilla'; 'nickeckert@comcast.net'; Delia Cervantes; 'Espinoza, Lorenzo, DHSEM'; 'Lover, Mary'; 'noralbarraza@comcast.net'; 'gnorvell@ebid-nm.org'; 'gesslinger@ebid-nm.org'
Cc: John Gwynne; Paul Dugie; Roger Hedrick
Subject: All Hazards Mitigation Plan Update;

Greetings.

I would like to take this opportunity to bring everyone up to speed with regards to our project to rewrite the All Hazards Mitigation Plan (Plan) for Dona Ana County and surrounding communities. If I failed to include someone with this email, I apologize; please share this email and its content with your key personnel/management personnel.

Our original Plan was adopted in August 2005 and pursuant to FEMA regulations for local governments at 44 CFR §201.3(d) (1) and (2) and §201.6(a) require that Local Mitigation Plans be updated and resubmitted to FEMA for approval every five (5) years. With that said, our Plan expired on August 31, 2010. We did not intentionally allow our Plan to expire but had a setback with grant funding glitches. Now, we have reapplied for a grant and were awarded the money.

We recently completed the RFP process and a contractor has been chosen. The contractor is TECTONIC (www.tectonicengineering.com). The contract is being finalized and we intend to have a kickoff meeting within the next few weeks. I will keep everyone posted as information becomes available.

If you have any questions or need further information, please let me know. I can be reached at 575-525-5566 (direct line) or 575-525-55558 (main line). My email is orlandof@donaanacounty.org. You may also speak with Paul T. Dugie, Flood Commission director, for information. He can be reached at 575-525-5558 or email at pauld@donaanacounty.org.

Thank you and I look forward to working with everyone.

Regards,

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

www.donaanacounty.org

Orlando Fierro

From: Paul Dugie
Sent: Monday, August 23, 2010 9:07 AM
To: Gail Norvell
Cc: Orlando Fierro
Subject: RE: DAC FLOOD MITIGATION PLAN

Gail,

We are working with New Mexico Department of Homeland Security and Emergency Management to obtain funds to rewrite the County Wide All Hazard Mitigation Plan. Once the funding is obtained we will schedule a meeting to start the process of obtaining a consultant to assist in the rewrite. I think it would be easiest for EBID to have a section of their own in the plan.

Orlando Fierro is taking the lead on this project. If you have further questions please feel free to contact him at 525-5558 or orlandof@donaanacounty.org.

Thanks, Paul.

From: Gail Norvell [mailto:gnorvell@ebid-nm.org]
Sent: Thursday, August 19, 2010 3:44 PM
To: Paul Dugie
Subject: DAC FLOOD MITIGATION PLAN

Paul
After speaking with the Office of Homeland Security about FEMA projects, EBID has decided it is best to begin with adopting the DAC plan. What do we need to do to accomplish this?

Gail E. Norvell, Controller
Elephant Butte Irrigation District
575-526-6671 x 410

Orlando Fierro

From:	admin_alerts
To:	dsolana@cityofsunlandpark-nm.org; Lorenzo.Espinoza@state.nm.us; susan.walker@state.nm.us; william.borthwick@state.nm.us; nickeckert@comcast.net; noralbarraza@comcast.net; jdpadilla@las-cruces.org; kadoolit@ad.nmsu.edu; mayor@villageofhatch.org; clerkadmin@villageofhatch.org; policechief@villageofhatch.org; dmaciel@ebid-nm.org; plopez@ebid-nm.org; gnorvell@ebid-nm.org; gesslinger@ebid-nm.org; tibloom@sccog-nm.com; mary.lover@dhs.gov
Sent:	Thursday, November 03, 2011 12:05 PM
Subject:	Relayed: Kick Off Meeting for the All Hazards Mitigation Plan;

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

dsolana@cityofsunlandpark-nm.org

Lorenzo.Espinoza@state.nm.us

susan.walker@state.nm.us

william.borthwick@state.nm.us

nickeckert@comcast.net

noralbarraza@comcast.net

jdpadilla@las-cruces.org

kadoolit@ad.nmsu.edu

mayor@villageofhatch.org

clerkadmin@villageofhatch.org

policechief@villageofhatch.org

dmaciel@ebid-nm.org

plopez@ebid-nm.org

gnorvell@ebid-nm.org

gesslinger@ebid-nm.org

tibloom@sccog-nm.com

mary.lover@dhs.gov

Subject: Kick Off Meeting for the All Hazards Mitigation Plan;

Orlando Fierro

From: Microsoft Outlook
To: Chuck McMahon; Daniel Hortert; John Gwynne; David Almaguer
Sent: Thursday, November 03, 2011 12:05 PM
Subject: Delivered: Kick Off Meeting for the All Hazards Mitigation Plan;

Your message has been delivered to the following recipients:

Chuck McMahon (chuckm@donaanacounty.org)

Daniel Hortert (danielho@donaanacounty.org)

John Gwynne (johngw@donaanacounty.org)

David Almaguer (davidal@donaanacounty.org)

Subject: Kick Off Meeting for the All Hazards Mitigation Plan;

Orlando Fierro

From: Microsoft Outlook
To: Roger Hedrick; Michael Villa; Paul Dugie
Sent: Thursday, November 03, 2011 12:05 PM
Subject: Delivered: Kick Off Meeting for the All Hazards Mitigation Plan;

Your message has been delivered to the following recipients:

Roger Hedrick (rogerh@donaanacounty.org)

Michael Villa (michaelv@donaanacounty.org)

Paul Dugie (pauld@donaanacounty.org)

Subject: Kick Off Meeting for the All Hazards Mitigation Plan;

Orlando Fierro

From: Orlando Fierro
Sent: Friday, January 20, 2012 3:44 PM
To: Michael Villa; David Almaguer; 'mayor@villageofhatch.org'; 'dsolana@cityofsunlandpark-nm.org'; 'J.D. Padilla'; 'nickeckert@comcast.net'; Delia Cervantes; 'Espinoza, Lorenzo, DHSEM'; 'noralbarraza@comcast.net'; 'Delyce Maciel'; 'Glen Haubold'; 'patlopez@ebid-nm.org'; 'brownchr@nmsu.edu'; 'Katrina Doolittle'; 'clerkadmin@villageofhatch.org'; 'Debra Lujan'; 'kevinhoban@msn.com'; Daniel Hortert; 'lvazquez@cityofsunlandpark-nm.org'; 'MVD, Hatch, TRD'
Cc: John Gwynne; Paul Dugie; Roger Hedrick; 'EFmartella@tectonicengineering.com'; 'scott@jefuller.com'; 'DCappelli@tectonicengineering.com'
Subject: Invitation to Our Next Meeting for the ALL HAZARDS MITIGATION PLAN;

Good afternoon;

As a reminder;
We have our next scheduled meeting for **Tuesday, January 24, 2012 from 8:30 a.m. – 12:30 p.m.** at the Dona Ana County Government Center, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd., Las Cruces, New Mexico.

Attached is the AGENDA for our next meeting as well as an INVITATIONAL LETTER.

Dona Ana Meeting Agenda_Mtg No...

Organization Invitation Letter...

Also, please bring the previous Plan with you, which was provided to you on a disk at the Kickoff Meeting in December 2011.

Please make every effort to attend, and if you cannot attend, you may send a representative from your agency.

If you have any questions or need further information, please let me know. I can be reached at 575-525-5566 (direct line) or 575-525-55558 (main line). My email is orlandof@donaanacounty.org.

Thank you.

Regards,

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

Orlando Fierro

From: Orlando Fierro
Sent: Thursday, January 12, 2012 1:31 PM
To: 'Delyce Maciel'; 'dsolana@cityofsunlandpark-nm.org'; 'NORALBARRAZA'; 'nickeckert@comcast.net'; 'mayor@villageofhatch.org'; 'patlopez@ebid-nm.org'; 'Katrina Doolittle'; 'dlujan@comcast.net'; 'brownchr@nmsu.edu'; 'ghaubold@ad.nmsu.edu'; 'J.D. Padilla'; 'kevinhoban@msn.com'; 'lvazquez@cityofsunlandpark-nm.org'; 'clerkadmin@villageofhatch.org'
Cc: Paul Dugie; 'EFmartella@tectonicengineering.com'; 'DCappelli@tectonicengineering.com'; 'scott@jefuller.com'; John Gwynne
Subject: Follow-Up to All Jurisdictions;
Attachments: Dona Ana County_Website text template.doc; Revised Dona Ana County_Website text template.doc

Good afternoon;

As a follow-up to a previous email sent back on December 22, 2011, if you have not done so already, please post website information regarding the Mitigation Plan efforts. This will need to be done as soon as possible. See Action Item No. 1-6 below.

I am attaching a website template as well as the County's revised template. Please use either one.

If you have any questions, please feel free to contact me via email or calling me at (575) 525-5566 (direct line) or (575) 525-5558 (main line).

I am here to assist you.

Thank you.

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

From: Orlando Fierro
Sent: Thursday, December 22, 2011 1:30 PM
To: 'Delyce Maciel'; 'dsolana@cityofsunlandpark-nm.org'; 'NORALBARRAZA'; 'nickeckert@comcast.net'; 'mayor@villageofhatch.org'; 'patlopez@ebid-nm.org'; 'Katrina Doolittle'; 'kevinhobar@msn.com'; 'dlujan@comcast.net'; 'brownchr@nmsu.edu'; 'ghaubold@ad.nmsu.edu'; J.D. Padilla
Cc: John Gwynne
Subject: FW: Dona Ana Meeting Items

Good afternoon;

Attached are some documents for your review.

I need to point out that one of the documents, titled *Meeting Notes*, has an *Action Item Summary* (which I have cut and pasted below) that layouts the responsibilities and roles for each Jurisdiction (Village of Hatch, City of Las Cruces, Town of Mesilla, City of Sunland Park, EBID, NMSU, & Dona Ana County).

One section that may be a little more difficult to complete at this time is Item No. 1-6, where it points out that each jurisdiction needs to post website information. Please try and make every effort to follow through with this request (if not this week, next); despite the short notice as well as it being the holidays and a majority of staff are out on leave or

similar. For the County, the website information has already been posted and I have attached my Revised version, which each jurisdiction is more than welcome to use.

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
1-1	Print and review the current 2004 Plan and bring copy to every meeting.	All Jurisdictions [12/22/11]
1-2	Tectonic/JEFuller will email electronic version of Local Resources List template to each jurisdiction to track contributors to the plan update at the local level that do not attend SC meetings.	Tectonic/JEFuller [12/22/11]
1-3	Each jurisdiction shall record and document all people contacted or involved as a planning resource at the local level, using the template provided by Tectonic/JEFuller	All Jurisdictions [4/1/12]
1-4	O. Fierro will send out organization invitations using the template provided by Tectonic/JEFuller via either email or letter.	O. Fierro [1/6/12]
1-5	Tectonic/JEFuller will provide template newspaper article and website posting language to the SC for use in the public involvement announcements	Tectonic/JEFuller [12/22/11]
1-6	Each jurisdiction will coordinate a posting of the public notice to their respective website.	All Jurisdictions [12/22/11]
1-7	DAC Flood Commission will publish an article in the January 8, 2012 Sunday edition of the local newspapers announcing the start of the update process and providing contact information for interested citizens. Copies of the new articles will be obtained by DAC Flood Commission and provided to Tectonic/JEFuller for documentation purposes.	DAC Flood Commission [1/8/12]
1-8	DAC Flood Commission will coordinate with the incorporated communities to present an overview of the plan update process in a public hearing setting as needed and desired by the communities. All public hearings will be scheduled and conducted prior to the end of March 2012. Copies of the meeting minutes, agendas and announcements will be provided to Tectonic/JEFuller for documentation in the plan.	DAC Flood Commission and Jurisdictions [3/31/12]

And please let me know if I can assist in any way. Either email me or call me.

Thanks

Orlando V. Fierro
Dona Ana County Flood Commission
575-525-5566 direct line
575-525-5558 main line

Orlando Fierro

From:	Orlando Fierro
Sent:	Monday, January 09, 2012 4:54 PM
To:	Michael Villa; David Almaguer; 'mayor@villageofhatch.org'; 'dsolana@cityofsunlandpark-nm.org'; J.D. Padilla; 'nickeckert@comcast.net'; Delia Cervantes; Espinoza, Lorenzo, DHSEM; noralbarraza@comcast.net; 'Delyce Maciel'; 'Glen Haubold'; 'patlopez@ebid-nm.org'; 'brownchr@nmsu.edu'; 'Katrina Doolittle'; 'clerkadmin@villageofhatch.org'; 'Debra Lujan'; 'kevinhoban@msn.com'; Daniel Hortert; 'lvazquez@cityofsunlandpark-nm.org'
Cc:	John Gwynne; Paul Dugie; Roger Hedrick; 'EFmartella@tectonicengineering.com'; 'scott@jefuller.com'; 'DCappelli@tectonicengineering.com'
Subject:	Invitation to Our Next Meeting for the ALL HAZARDS MITIGATION PLAN;

Greetings.

I would like to invite everyone to our next meeting scheduled for **Tuesday, January 24, 2012 from 8:30 a.m. – 12:30 p.m.** at the Dona Ana County Government Center, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd., Las Cruces, New Mexico.

Within a couple weeks, I will send everyone an agenda and any additional information for our meeting.

Please make every effort to attend, and if you cannot attend, you may send a representative from your agency.

If you have any questions or need further information, please let me know. I can be reached at 575-525-5566 (direct line) or 575-525-55558 (main line). My email is orlandof@donaanacounty.org.

Thank you.

Regards,

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

Orlando Fierro

From: Orlando Fierro
Sent: Friday, September 02, 2011 12:19 PM
To: Michael Villa; David Almaguer; 'mayor@villageofhatch.org'; 'dsolana@cityofsunlandpark-nm.org'; J.D. Padilla; 'nickeckert@comcast.net'; Delia Cervantes; Espinoza, Lorenzo, DHSEM; Lover, Mary; noralbarraza@comcast.net; 'gnorvell@ebid-nm.org'; gesslinger@ebid-nm.org
Cc: John Gwynne; Paul Dugie; Roger Hedrick
Subject: All Hazards Mitigation Plan Update;

Greetings.

I would like to take this opportunity to bring everyone up to speed with regards to our project to rewrite the All Hazards Mitigation Plan (Plan) for Dona Ana County and surrounding communities. If I failed to include someone with this email, I apologize; please share this email and its content with your key personnel/management personnel.

Our original Plan was adopted in August 2005 and pursuant to FEMA regulations for local governments at 44 CFR §201.3(d) (1) and (2) and §201.6(a) require that Local Mitigation Plans be updated and resubmitted to FEMA for approval every five (5) years. With that said, our Plan expired on August 31, 2010. We did not intentionally allow our Plan to expire but had a setback with grant funding glitches. Now, we have reapplied for a grant and were awarded the money.

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If you have any questions or need further information, please let me know. I can be reached at 575-525-5566 (direct line) or 575-525-55558 (main line). My email is orlandof@donaanacounty.org. You may also speak with Paul T. Dugie, Flood Commission director, for information. He can be reached at 575-525-5558 or email at pauld@donaanacounty.org.

Thank you and I look forward to working with everyone.

Regards,

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

www.donaanacounty.org

Orlando Fierro

From: Delyce Maciel [dmaciel@ebid-nm.org]
Sent: Tuesday, September 06, 2011 10:05 AM
To: Orlando Fierro
Subject: FW: All Hazards Mitigation Plan Update;

Orlando,

Good Morning! Would you please add me and Patrick Lopez to your email list for this meeting? Patrick's email is plopez@ebid-nm.org.

Thank you,

Delyce Maciel, PHR
HR/Safety Director
Elephant Butte Irrigation District
530 S Melendres St, Las Cruces NM 88005
(575) 526-6671 x411 office
(575) 650-2477 mobile
(575) 526-2234 fax
Hours: Mon - Fri 7:30a - 4:00p MST

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From: Gary Esslinger
Sent: Tuesday, September 06, 2011 9:22 AM
To: Patrick Lopez; Delyce Maciel
Subject: FW: All Hazards Mitigation Plan Update;

From: Orlando Fierro [mailto:orlandof@donaanacounty.org]
Sent: Friday, September 02, 2011 12:19 PM
To: Michael Villa; David Almaguer; 'mayor@villageofhatch.org'; 'dsolana@cityofsunlandpark-nm.org'; J.D. Padilla; 'nickeckert@comcast.net'; Delia Cervantes; Espinoza, Lorenzo, DHSEM; Lover, Mary; noralbarraza@comcast.net; Gail Norvell; Gary Esslinger
Cc: John Gwynne; Paul Dugie; Roger Hedrick
Subject: All Hazards Mitigation Plan Update;

Greetings.

I would like to take this opportunity to bring everyone up to speed with regards to our project to rewrite the All Hazards Mitigation Plan (Plan) for Dona Ana County and surrounding communities. If I failed to include someone with this email, I apologize; please share this email and its content with your key personnel/management personnel.

Our original Plan was adopted in August 2005 and pursuant to FEMA regulations for local governments at 44 CFR §201.3(d) (1) and (2) and §201.6(a) require that Local Mitigation Plans be updated and resubmitted to FEMA for approval every five (5) years. With that said, our Plan expired on August 31, 2010. We did not intentionally allow our Plan to expire but had a setback with grant funding glitches. Now, we have reapplied for a grant and were awarded the money.

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If you have any questions or need further information, please let me know. I can be reached at 575-525-5566 (direct line) or 575-525-55558 (main line). My email is orlandof@donaanacounty.org. You may also speak with Paul T. Dugie, Flood Commission director, for information. He can be reached at 575-525-5558 or email at pauld@donaanacounty.org.

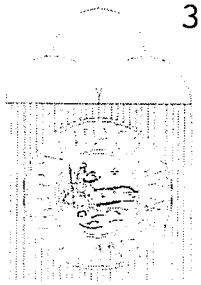
Thank you and I look forward to working with everyone.

Regards,

Orlando V. Fierro, CFM
Dona Ana County Flood Commission

www.donaanacounty.org

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567



Character Counts[III]

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

DATE: 12-12-11 FAX MESSAGE FROM: Orlando V. Fierro

ATTENTION OF: Mayor Nora Barraza and Nick Eckert, Town Clerk / Treasurer

RE: REMINDER Kick-Off Meeting for All Hazards Mitigation Plan

FAX NO.: 575-541-6327

NUMBER OF PAGES (Including this page): 2

PLEASE ADVISE IF ALL PAGES ARE NOT RECEIVED.

Telephone: (575) 525-5558 Fax: (575) 525-5567

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☐ PLEASE RECYCLE

COMMENTS:

Memo Attached.

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts ™

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

TO: Mayor Nora Barraza
Mr. Nick Eckert, Town Clerk/Treasurer

FROM: Orlando V. Fierro, Planner/CRS Coordinator

SUBJECT: Kick-Off Meeting for the All Hazards Mitigation Plan

RE: REMINDER for Kickoff Meeting

DATE: Monday, December 12, 2011

REMINDER REMINDER REMINDER REMINDER

Our Kick-Off meeting for the ALL HAZARDS MITIGATION PLAN (Plan) is **TUESDAY, DECEMBER 13, 2011** at **10:00 a.m.**

The meeting will be held at the **Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room)**, 845 N. Motel Blvd, Las Cruces, New Mexico.

Please make every effort to attend. If you are unable to attend, please send a representative.

Thank you.

Orlando V. Fierro, CFM
575-525-5566 direct line
575-525-5558 main line

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts[III]

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

94.

DATE: 12-12-11 FAX MESSAGE FROM: Orlando V. Fierro

ATTENTION OF: Mayor Judd Nordyke and Jim Schoonover, Village Clerk/Administrator

RE: REMINDER Kick-Off Meeting for All Hazards Mitigation Plan

FAX NO.: 575-267-1135

NUMBER OF PAGES (Including this page): 2

PLEASE ADVISE IF ALL PAGES ARE NOT RECEIVED.

Telephone: (575) 525-5558 Fax: (575) 525-5567

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☐ PLEASE RECYCLE

COMMENTS:

Memo Attached.

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts ™

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

TO: Mayor Judd Nordyke
Mr. Jim Schoonover, Village Clerk/Administrator

FROM: Orlando V. Fierro, Planner/CRS Coordinator

SUBJECT: Kick-Off Meeting for the All Hazards Mitigation Plan

RE: REMINDER for Kickoff Meeting

DATE: Monday, December 12, 2011

REMINDER REMINDER REMINDER REMINDER

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Please make every effort to attend. If you are unable to attend, please send a representative.

Thank you.

Orlando V. Fierro, CFM
575-525-5566 direct line
575-525-5558 main line

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts ®

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

TO: Mayor Judd Nordyke
Mr. Jim Schoonover, Village Clerk/Administrator

FROM: Orlando V. Fierro, Planner/CRS Coordinator
OVF

SUBJECT: Kick-Off Meeting for the All Hazards Mitigation Plan

DATE: Friday, November 4, 2011

Greetings.

The time has finally arrived to have our **Kick-Off meeting** for the **ALL HAZARDS MITIGATION PLAN (Plan).**

The contractor who will compile and write our Plan is **Tectonic Engineering and Surveying Consultants, PC.** They will be coming to Las Cruces for the Kick-Off meeting.

At this time, I am proposing a meeting date and time of: Tuesday, December 13, 2011 at 9:30 a.m.

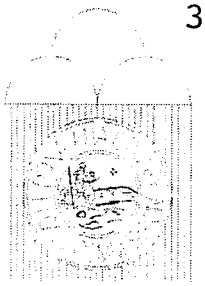
The meeting will be held at the Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.

The agenda for our initial meeting is to set up timelines and procedures for writing our PLAN.

Thank you.

Orlando V. Fierro, CFM
575-525-5566 direct line
575-525-5558 main line

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567



Character Counts[III]

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

DATE: 11-04-11 FAX MESSAGE FROM: Orlando V. Fierro

ATTENTION OF: Mayor Judd Nordyke and Jim Schoonover, Village Clerk/Administrator

RE: Kick-Off Meeting for All Hazards Mitigation Plan

FAX NO.: 575-267-1135

NUMBER OF PAGES (Including this page): 2

PLEASE ADVISE IF ALL PAGES ARE NOT RECEIVED.

Telephone: (575) 525-5558 Fax: (575) 525-5567

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COMMENTS:

Memo Attached.

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts ™

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

TO: Linda Vasquez, Community Development Director
Dwaine Solana, Building Inspector, CFM

FROM: Orlando V. Fierro, Planner, CRS Coordinator for Dona Ana County

SUBJECT: Kick-Off Meeting for the All Hazards Mitigation Plan

DATE: Tuesday, November 08, 2011

Greetings.

The time has finally arrived to have our **Kick-Off meeting** for the **ALL HAZARDS MITIGATION PLAN (Plan).**

The contractor who will compile and write our Plan is **Tectonic Engineering and Surveying Consultants, PC.** They will be coming to Las Cruces for the Kick-Off meeting.

At this time, I am proposing a meeting date and time of: Tuesday, December 13, 2011 at 9:30 a.m.

The meeting will be held at the Dona Ana County Government Complex, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.

The agenda for our initial meeting is to set up timelines and procedures for writing our PLAN.

Please make every effort to attend.

Thank you.

Orlando V. Fierro, CFM
575-525-5566 direct line
575-525-5558 main line

Doña Ana County
OFFICE OF THE
FLOOD COMMISSIONER
Phone: (575) 525-5558
Fax: (575) 525-5567

Character Counts[ID]

FLOOD COMMISSIONER
John Allen
DIRECTOR
Paul T. Dugie, P.E.

DATE: 11-08-11 FAX MESSAGE FROM: Orlando V. Fierro

ATTENTION OF: Linda Vasquez, Community Development Dir, and Dwaine Solana, Building Inspector, Certified Floodplain Manager

RE: Kick-Off Meeting for All Hazards Mitigation Plan

FAX NO.: 575-589-1222 and 575-589-7481

NUMBER OF PAGES (Including this page): 2

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COMMENTS:

Memo Attached.

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JE FULLER
HYDROLOGY & GEOMORPHOLOGY, INC.

MEETING DATE: December 13, 2011

MEETING TIME: 8:30AM TO 9:45AM

MEETING LOCATION: Doña Ana County Government Center
Room 1-117 (Multi-Purpose Conference Room)
845 N. Motel Blvd, Las Cruces, New Mexico

DISTRIBUTION: Meeting Attendees

FROM: Ed Martella – Tectonic
Scott Ogden – JEF

RE: **Doña Ana County All Hazard Mitigation Plan**
Project Team Meeting

ATTENDEES: David Almaguer – DAC Emergency Management Supervisor
Paul Dugie – DAC Flood Commission Director
Orlando Fierro – DAC Flood Commission Planner/CRS Coordinator
John Gwynne – DAC Flood Commission Engineer Supervisor
Rickard Kummerle – Tectonic Engineering Principal
Edward Martella – Tectonic Project Manager
Scott Ogden – JE Fuller Project Manager
Michael Villa – DAC Emergency Management

AGENDA

1. **INITIAL INTRODUCTIONS (8:30AM – 8:45AM)**
2. **DISCUSSION OF SCOPE AND PROJECT SCHEDULE (8:45AM – 9:00AM)**
3. **CURRENT PLAN REVIEW (9:00AM – 9:15AM)**
    a. **Quick Plan Overview**
    b. **Proposed Outline for New Plan**
4. **DATA NEEDS (9:15AM – 9:45AM)**
    a. **Base GIS Data**
    b. **Hazard specific data**
    c. **Critical Facilities and Infrastructure**

DISCUSSION

Agenda Item 1:

- R. Kummerle introduced himself, E. Martella and S. Ogden as the consultant team and explained the informal purpose of the Project Team meeting. Each of the DAC representatives introduced themselves and R. Kummerle turned the meeting over to S. Ogden.

Agenda Item 2:

- S. Ogden presented a brief overview of the Project Team meeting agenda and purpose.
- S. Ogden presented the attendees with a document outlining the anticipated meeting agendas for the rest of the project and explained that the intention was to conduct one meeting on an approximately monthly basis. The first draft is anticipated for mid June 2012. Each meeting will be 4-hours in length and each meeting is critical as each meeting builds upon the prior meeting's agenda.
- All three Tectonic/JEFuller consultants expressed the importance of complete attendance by all signing jurisdictions.
- P. Dugie noted that the Village of Hatch has hired a consultant to prepare a mitigation plan for the village, but as of yet, they have not produced a plan. The attendees discussed the benefits to Hatch to stay in the multi-jurisdictional plan and the fact that it would be no cost to the village except for the time it takes to provide information. The DAC Flood Commission will coordinate with Hatch to get a final standing from them on their involvement.
- P. Dugie noted that the county personnel in this meeting will likely be tasked with doing most of the work and will make themselves available to the other communities to help as needed.
- O. Fierro noted that NMSU will be involved in the Steering Committee and will be an adopting jurisdiction in the 2012 Plan.
- The team discussed the Elephant Butte Irrigation District boundaries as compared to the county boundaries and eligibility/approvability implications to having jurisdictional boundaries that extend beyond the county limits. The team will coordinate with EBID in the next meeting to determine if any problems exist. *(it is noted that EBID officials were consulted and the boundaries are essentially close enough to the county limits to not be a problem. EBID will send a map showing their district limits for verification.)*

Agenda Item 3:

- S. Ogden led a quick review of the current 2004 Plan and a general discussion of the prior experiences with FEMA reviews. He explained the need for process documentation, assessment of each element of the 2004 Plan, and the requirement for a new document to be resubmitted to FEMA.

- S. Ogden noted that the 2004 Plan is basically organized according to CRS Section 511 requirements and recommended that the plan be restructured to flow with the current FEMA crosswalk. This would facilitate a better review by FEMA and help to ensure that all FEMA required elements are addressed. A table correlating the new plan sections to CRS Section 511 elements could be provided as an appendix similar to what is in the 2004 Plan.
- S. Ogden presented a proposed plan outline for the team's consideration along with two examples of plans that have been completed and approved at FEMA using the proposed outlines. P. Dugie expressed a desire to see the plan formatted for ease of use by both the county and the other jurisdictions. Several options were discussed and the Tectonic/JEFuller team will give the outline some thought to achieve the usability goal desired.
- S. Ogden will provide a template for each jurisdiction to use during the planning process for documenting the local resources involved in the plan update outside of the main planning team.
- S. Ogden presented a brief overview of the update requirements, which included an overview of the new October 2011 FEMA review guidance. He stressed that the FEMA review will likely be more stringent than last time. More detail will be discussed in the next meeting.

Agenda Item 4:

- O. Fierro acknowledged the receipt of the data request document and stated that the DAC Flood Commission's GIS Analyst, Tambri Hunteman, will be in charge of compiling those data sets and getting them delivered. O. Fierro also stated that he was coordinating with the Community Development office to get the other documents requested.
- S. Ogden inquired about the floodplain data, and P. Dugie stated that there is no DFIRM database for the county yet, and that the Q3 data that JEFuller currently has is probably the best available. He will also check with T. Hunteman to make sure the county does not have anything else more current.
- M. Villa stated that OEM may have some information to add to the critical facilities list from the 2004 Plan and would coordinate with O. Fierro and T. Hunteman to get and updated list and GIS coverage to Tectonic/JEFuller.
- S. Ogden stated that other hazard specific data requests will need to wait until after the initial hazard list is developed from the 10am meeting.

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
PT-1	The DAC Flood Commission will coordinate with the Village of Hatch to determine Hatch's involvement status in the update.	DAC Flood Commission [12/22/11]
PT-2	Tectonic/JEF will coordinate with Tambri Hunteman to obtain the needed GIS data.	Tectonic/JEFuller T. Hunteman [12/22/11]
PT-3	M. Villa will coordinate with T. Hunteman to provide an up-to-date list of critical facilities to Tectonic/JEFuller	M. Villa [12/22/11]

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HYDROLOGY & GEOMORPHOLOGY, INC.

MEETING DATE: December 13, 2011

MEETING TIME: 10:00 AM TO 12:30PM

MEETING LOCATION: Doña Ana County Government Center
Room 1-117 (Multi-Purpose Conference Room)
845 N. Motel Blvd, Las Cruces, New Mexico

DISTRIBUTION: Meeting Attendees

FROM: Ed Martella – Tectonic
Scott Ogden – JEFuller

RE: **Doña Ana County All Hazard Mitigation Plan**
Steering Committee Meeting No. 1

ATTENDEES:
David Almaguer – DAC Emergency Management Supervisor
Chris Brown – NMSU Geography Dept Head
Lloyd Burns – Village of Hatch Trustee
Raymond Carr – NMSU GIS Analyst
Mike Castillo – Village of Hatch Public Works Director
Katrina Doolittle – NMSU Health & Safety Director
Paul Dugie – DAC Flood Commission Director
Lorenzo Espinoza – State of NM Emergency Mgmt
Orlando Fierro – DAC Flood Commission Planner/CRS Coordinator
Andrew Guerra – Bohannan Huston, Inc.
John Gwynne – DAC Flood Commission Engineer Supervisor
Glen Haubold – NMSU Facilities & Services Asst Vice President
Roger Hedrick – DAC Community Development Deputy Director
Kevin Hoban – Town of Mesilla Fire Department
Daniel Hortent – DAC Community Development Planner
Rickard Kummerle – Tectonic Engineering Principal
Patrick Lopez – Elephant Butte Irrigation District Supervisor
Debbie Lujan – Town of Mesilla Public Works Director
Delyce Macial – Elephant Butte Irrigation District
Edward Martella – Tectonic Project Manager
Scott Ogden – JE Fuller Project Manager
J. D. Padilla – City of Las Cruces Floodplain Administrator
Dwaine Solana – City of Sunland Park Building Inspector
Michael Villa – DAC Emergency Management Coordinator

NOTE: No Representation from City of Anthony

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AGENDA

1. INTRODUCTIONS FOR ARRIVALS (10:00AM – 10:15AM)
2. DMA2K OVERVIEW AND UPDATE REQUIREMENTS (10:15AM – 10:45AM)
    a. General Planning Elements
    b. Current Plan
    c. Update Requirements
3. PLANNING PROCESS (10:45AM – 11:30AM)
    a. DACSC Roles and Responsibilities
    b. Additional Invitations
    c. Public Involvement Strategy
4. RISK ASSESSMENT (11:30AM – NOON)
    a. Initial Hazard List Identification
5. SCHEDULE NEXT MEETING(S) (NOON – 12:15PM)

DISCUSSION

Agenda Item 1:

- O. Fierro opened the meeting and welcomed everyone and then turned the meeting over to the Tectonic Team.
- R. Kummerle introduced himself, E. Martella and S. Ogden as the consultant team and explained the roles of the consultants and how they relate to plan update process. He also presented a brief overview of the meeting agenda.
- R. Kummerle explained the value in the multi-jurisdictional approach and the extreme importance of participation by all jurisdictions seeking approval. He stressed that lack of participation would lead to exclusion from the plan. R. Kummerle then turned the meeting over to S. Ogden.
- S. Ogden invited each attendee to introduce themselves and share whether they were involved in the last plan preparation or not and their perceived role in the process.

Agenda Item 2:

- S. Ogden presented a brief overview of the DMA2000 requirements and purpose for preparing a mitigation plan. The discussion included a review of the specific FEMA mitigation grants that require an approved mitigation plan for eligibility.
- S. Ogden presented a brief overview of the existing 2004 Plan and requested that each Steering Committee (SC) member review and become familiar with the 2004

Plan. He also requested that each SC member bring a copy of the 2004 Plan to every meeting, as it will be referred to often.

- S. Ogden presented a brief overview of the update requirements, which included an overview of the new October 2011 FEMA review guidance. He stressed that the FEMA review will likely be more stringent than last time.

Agenda Item 3a:

- S. Ogden jointly led a discussion / presentation of the SC roles and responsibilities including:
    - The primary point of contact (PPOC)
    - The jurisdictional point of contact (JPOC)
    - The local planning resources (other staff, outside agencies, business, school, non-profit reps, etc. contacted or referred to).
- S. Ogden reiterated prior statements stressing the requirement for participation and for continuity of participants.
- S. Ogden will provide a template for each jurisdiction to use during the planning process for documenting the local resources involved in the plan update outside of the main planning team.
- DAC Flood Commission was identified as the PPOC agency with O. Fierro taking the lead. Each jurisdiction was encouraged to identify a JPOC by the next meeting.

Agenda Item 3b:

- S. Ogden reviewed the DMA2000 requirement for extending an opportunity for participation to key outside entities that generally include:
    - Major Business Owners (Chambers of Commerce are good for this)
    - Academic Institutions (Public and Private, K-12, College, University, etc.)
    - Utility Companies
    - Water, Sewer, Fire Districts
    - Adjacent Counties/Cities
    - State and Federal agencies

  Tectonic/JEFuller provided a template invitation letter to O. Fierro for him to distribute to key organizations within or serving Doña Ana County. The invitations will go out no later than January 6, 2012.

Agenda Item 3c:

- S. Ogden led a discussion/presentation of the public involvement requirements of DMA2000.
- The SC briefly reviewed and discussed the efficacy of the 2004 Plan public involvement process and discussed various options for the 2012 Plan update process including newspaper articles, public hearing presentations, and web page postings. The following public involvement strategy was decided:

- A public notice will be posted on all of the jurisdictions' websites using a common template.
- The DAC Flood Commission will submit a short article announcing the update process to the local newspapers. The article will be published in the Sunday editions and is targeted for the press release notifying the start of the update process.
- Several participants felt that some level of public hearings needed to be conducted at each incorporated jurisdiction to ensure that all public comment is heard and that elected officials are made aware of the plan and its ultimate required adoption. The DAC Flood Commission will work jointly with interested jurisdictions to make a short presentation in a public hearing session explaining the plan update process and schedule.

- Tectonic/JEFuller will send out template language for the jurisdictions to use as a basis for the various public notices.

Agenda Item 4:

- S. Ogden presented an overview of what a risk assessment is and its purpose in the overall scheme of mitigation planning. He discussed the approach that the planning team will ultimately step through regarding the 2012 Plan update. The first of those steps was to identify an initial list of hazards for advancing to a profile analysis. Criteria used by the SC for selecting the initial list of hazards included:
  - Start with Current Plan hazards
  - Must consider all hazards listed in State Plan
  - DMA2000 and FEMA Crosswalk recommended that natural hazards should be the focus
  - All profiled hazards must lead to the development of mitigation actions/projects (A/Ps)
    - Must be at least 1 A/P per hazard in the 2012 Plan
    - The hazards must be relevant to at least one participating jurisdiction but do not have to be relevant to all.
    - Selected hazards should have some historic precedent or at least a high probability of future risk
    - Have potential for identification of specific and attainable A/Ps
  - If no intended A/P, then hazard is probably not a risk and it should be discarded from plan profile.
- The planning team reviewed the list of hazards previously evaluated in the 2004 Plan as well as a comprehensive list of hazards identified in the 2010 State Plan. Hazards similar to both plans were highlighted and it was noted that the 2010 State Plan only considered natural hazards. Each of the hazard lists were discussed by the SC using the above considerations and the following hazards were removed from further consideration as follows:
  - 2004 Plan List:
    - Winter Storm – not perceived as a big threat to the county.

- Extreme Heat – noted as a hazard by the committee, but there is little in the way of mitigating that can be done. Mostly preparedness and response functions which are addressed in the county's EOP.
- Levee Failure – levee failure is acknowledged by the SC as potential threat, but all of the levees within the county are federally owned and maintained (IBWC), so mitigation opportunities lie with those organizations.
- HAZMAT, Power Outage, and Terrorism – the SC chose to drop these hazards and stick with the natural hazards. There is very little in the way of mitigation that is realistic to the SC jurisdictions. Most actions are preparedness or response oriented and are addressed in the county's EOP.

  - 2010 State Plan List:
    - Expansive Soils – the SC did not perceive the threat of expansive soils in the county as warranting a full profile. This is normally dealt with as a regular part of the development or engineering process.
    - Land Subsidence – this hazard is not known to be a significant threat to the county.
    - Landslide – no significant landslide threats were perceived for the county.
    - Lightning and Hail – both hazards are acknowledged by the SC as probable hazards for most of the county, however, other than educating the public about lightning and hail safety (e.g. – what to do in the case of an event), there is little that was perceivable in the way of mitigation A/Ps.
    - Volcano – the SC acknowledged the presence of historic volcanic flows within the county, however there are no active vents or realistic probability of volcanic event risk.

- The SC chose to group all wind related hazards into one category as the mitigation efforts for those hazards are similar. The new category will be called "Severe Wind" and will include straight line winds, Tornadoes, Gustnadoes, thunderstorm related microbursts and macrobursts, and the common dust storms. The discussions concluded with the following hazard list:
  - Dam Failure
  - Drought
  - Earthquake
  - Floods
  - Severe Winds
  - Wildfire
- Tectonic/JEFuller will begin the process of compiling the necessary data for these hazards in preparation for the next meeting.

Agenda Item 5:

- The next planning team meeting is scheduled for: ***January 24, 2012, from 8:30am to 12:30pm at the Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.***

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
1-1	Print and review the current 2004 Plan and bring copy to every meeting.	All Jurisdictions [12/22/11]
1-2	Tectonic/JEFuller will email electronic version of Local Resources List template to each jurisdiction to track contributors to the plan update at the local level that do not attend SC meetings.	Tectonic/JEFuller [12/22/11]
1-3	Each jurisdiction shall record and document all people contacted or involved as a planning resource at the local level, using the template provided by Tectonic/JEFuller	All Jurisdictions [4/1/12]
1-4	O. Fierro will send out organization invitations using the template provided by Tectonic/JEFuller via either email or letter.	O. Fierro [1/6/12]
1-5	Tectonic/JEFuller will provide template newspaper article and website posting language to the SC for use in the public involvement announcements	Tectonic/JEFuller [12/22/11]
1-6	Each jurisdiction will coordinate a posting of the public notice to their respective website.	All Jurisdictions [12/22/11]
1-7	DAC Flood Commission will publish an article in the January 8, 2012 Sunday edition of the local newspapers announcing the start of the update process and providing contact information for interested citizens. Copies of the new articles will be obtained by DAC Flood Commission and provided to Tectonic/JEFuller for documentation purposes.	DAC Flood Commission [1/8/12]
1-8	DAC Flood Commission will coordinate with the incorporated communities to present an overview of the plan update process in a public hearing setting as needed and desired by the communities. All public hearings will be scheduled and conducted prior to the end of March 2012. Copies of the meeting minutes, agendas and announcements will be provided to Tectonic/JEFuller for documentation in the plan.	DAC Flood Commission and Jurisdictions [3/31/12]

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, ALL HAZARDS MITIGATION PLAN Kickoff Meeting for Tuesday, December 13, 2011			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Orlando V. Fierro Orlando V. Fierro	Dona Ana County Flood Commission Planner / CRS Coordinator CFM	575-525-5558	orlandof@donaanacounty.org
Paul Dugie Paul T Dugie	Dona Ana County Flood Commission Director	575-525-5558	pauld@donaanacounty.org
John Gwynne John O. Gwynne	Dona Ana County Flood Commission Engineer Supervisor	575-525-5558	johngw@donaanacounty.org
Michael Villa [signature]	Office of Emergency Management OEM Coordinator	575-647-7901	michaelv@donaanacounty.org
David Almaguer [signature]	Office of Emergency Management Emergency Mgt Specialist	575-647-79041	davidal@donaanacounty.org
Daniel Hortert [signature]	Dona Ana County Planning Senior Planner	575-525-6113	danielho@donaanacounty.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, ALL HAZARDS MITIGATION PLAN Kickoff Meeting for Tuesday, December 13, 2011			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Delyce Maciel	Elephant Butte Irrigation District	575-526-6671 x411 office	dmaciel@ebid-nm.org
Lorenzo Espinoza	NM Dept of Homeland Security and Emergency Management		Lorenzo.Espinoza@state.nm.us
J.D. Padilla	City of Las Cruces Floodplain Administrator	575-528-3131	jdpadilla@las-cruces.org
Edward F. Martella	Tectonic Engineering & Surveying Consultants P.C.	804-217-8504	EFMartella@tectonicengineering.com
David Cappelli	Tectonic Engineering & Surveying Consultants P.C.		DCappelli@tectonicengineering.com
Glen Haubold	NMSU Assistant VP for Facilities & Services		ghaubold@ad.nmsu.edu

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, ALL HAZARDS MITIGATION PLAN
Kickoff Meeting for Tuesday, December 13, 2011

Print Name and Provide Signature	Agency Name	Phone Number	Email Address
W. Scott Ogden W. Scott Ogden	JE Fuller/Hydrology & Geomorphology, Inc. Project Mgr	480-222-571 C 480-299-3394	scott@jefuller.com
Mayor Nora L. Barraza	Town of Mesilla	575-524-3262	noralbarraza@comcast.net
Nick Eckert	Town of Mesilla	575-524-3262	nickeckert@comcast.net
Mayor ~~Judd~~ Nordyke Lloyd Burns Lloyd Burns	Village of Hatch Trustee	575-267-5216	mayor@villageofhatch.org
Jim ~~Schoonover~~ Mike Castillo Mike Castillo	Village of Hatch Public Work Director	575-267-5216	clerkadmin@villageofhatch.org
Dwaine Solana [signature]	City of Sunland Park Bldg Inspector, CFM	575-589-6912 915-487-9562 EITHER #	dsolana@cityofsunlandpark-nm.org

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, ALL HAZARDS MITIGATION PLAN Kickoff Meeting for Tuesday, December 13, 2011			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
Linda Vazquez	City of Sunland Park	575-589-3631	lvazquez@cityofsunlandpark-nm.org
Patrick Lopez Patrick M Lopez	Elephant Butte Irrigation District SCADA - Hydrology - WQ Supervisor	575-526-6671	~~plopez@ebid-nm.org~~ patlopez@ebid-nm.org
Katrina Doolittle K Doolittle	NMSU Dir for Env Health & Safety	575-646-3327	kadoolit@ad.nmsu.edu
Chris Brown	NMSU Dept Head for Geography & Dir for Spatial Apps Research Center		brownchr@nmsu.edu
Raymond Carr	NMSU GIS Analyst Dept of Geography	646.5755	BIKERAC@NMSU.EDU

Dona Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, NMSU, EBID, ALL HAZARDS MITIGATION PLAN Kickoff Meeting for Tuesday, December 13, 2011			
Print Name and Provide Signature	**Agency Name**	**Phone Number**	**Email Address**
RICHARD P. KUMMERLE RG PGP.P [signature]	TECTONIC ENGINEERING	800-829 6531 cell 914-~~456~~ 5550	RP.KUMMERLE@TECTONICENGINEERING.COM
Kevin Hoban [signature]	Town of Mesilla Fire Dept.	575-523-1311	kevinhoban@msn.com
Roger Hedrick Roger Hedrick	CD DAC Dona Ana County Planning Deputy Director	312 6631 525-6120	rogerh@donaacounty.org
Andrew Guerra Andrew Guerra	BOHANNAN HOSTON Engineer	575-532-8670	aguerra@bhinc.com
Delyce Maciel [signature]	EBID	(575) 526-6671 x411	dmaciel@ebid-nm.org
Debbie Lujan Debbie Lujan	Town of Mesilla	524-3262 ext 103	dlujan@comcast.net

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HYDROLOGY & GEOMORPHOLOGY, INC.

MEETING DATE: January 24, 2012

MEETING TIME: 8:30 AM TO 12:30PM

MEETING LOCATION: Doña Ana County Government Center
Room 1-117 (Multi-Purpose Conference Room)
845 N. Motel Blvd, Las Cruces, New Mexico

DISTRIBUTION: Meeting Attendees

FROM: Ed Martella – Tectonic
Scott Ogden – JEFuller

RE: **Doña Ana County All Hazard Mitigation Plan**
Steering Committee Meeting No. 2

ATTENDEES:
David Cappelli – Tectonic Senior Security / EOP Specialist
Katrina Doolittle – NMSU Health & Safety Director
Paul Dugie – DAC Flood Commission Director
Lorenzo Espinoza – State of NM Emergency Mgmt
Orlando Fierro – DAC Flood Commission Planner/CRS Coordinator
Jeff Gray – Town of Mesilla Marshal
John Gwynne – DAC Flood Commission Engineer Supervisor
Glen Haubold – NMSU Facilities & Services Asst Vice President
Kevin Hoban – Town of Mesilla Fire Department
Daniel Hortert – DAC Community Development Planner
Martin Lopez – La Clinica de Familia Representative
Debbie Lujan – Town of Mesilla Public Works Director
Delyce Macial – Elephant Butte Irrigation District HR / Safety Director
Edward Martella – Tectonic Project Manager
Diana Murillo – City of Anthony Trustee
Scott Ogden – JE Fuller Project Manager
J. D. Padilla – City of Las Cruces Floodplain Administrator
Miguel Parra – The Ability Center for Independent Living
Dwaine Solana – City of Sunland Park Building Inspector
Michael Villa – DAC Emergency Management Coordinator
Alexis Zarret – NM Commission for Deaf and Hard of Hearing

NOTE: No Representation from Village of Hatch

AGENDA

1. **INITIAL INTRODUCTIONS (8:30AM – 8:45AM)**

2. TASK ASSIGNMENT STATUS REVIEW (8:45AM – 9:15AM)
3. RISK ASSESSMENT TOPICS:
    a. Hazard Profile Data Review (9:15AM – 10:30AM)
        i. Mapping / Maps
        ii. Historic Hazard Database Overview

    BREAK (10:30AM – 10:45AM)

    b. Critical Priority Risk Index (CPRI) (10:45AM – 11:00AM)
    c. Critical Facilities And Infrastructure (11:00AM – 11:15AM)
    d. Development Trend Discussion (11:15AM – 11:45AM)
        i. Past Plan Cycle (last 5 years)
        ii. Future Development (5-year horizon)
4. MITIGATION STRATEGY TOPICS
    a. Existing Mitigation Action/Project Assessment (11:45 – 12:15PM)
5. CLOSING ITEMS (12:15PM – 12:30PM)
    a. Schedule Next Meeting
    b. Summarize Action Items / Task Assignments

DISCUSSION

Agenda Item 1:

- E. Martella provided a brief introduction of the consultant team and inquired if any of the attendees were new from the last meeting. Several responded and introduced themselves. E. Martella then turned the meeting over to S. Ogden.

Agenda Item 2:

- S. Ogden conducted a brief review of the outstanding task items and reiterated the importance of completing the assignments in timely manner and getting that information to O. Fierro at DACFC as soon as possible.
- It was noted that no representatives for the Village of Hatch were in attendance. S. Ogden reiterated the importance of attendance at all meetings and the very real potential for a community to be non-approvable without the attendance. O. Fierro will coordinate with Hatch to ensure they understand and attend if they still want to be part of the Plan.
- Other minor elements that still needed attention include:

- Still need a GIS boundary shapefile for EBID. D. Macial shall look into it and get the shapefile to O. Fierro for delivery to Tectonic/JEFuller.
- Still need a GIS boundary shapefile for NMSU Property. K. Doolittle and G. Haubold will look into it and get shapefiles to O. Fierro for delivery to Tectonic/JEFuller.

Agenda Item 3.a:

- S. Ogden presented a series of maps and explanatory handouts showing the various hazard profile data compiled by JEFuller for the six hazards identified by the Steering Committee during Meeting No. 1. He also presented a historic hazard event database compiled from readily available sources, studies and reports. Each set of maps and data was discussed and the highlights of the discussions are summarized as follows:
  - **Dam Failure**: M. Villa has downstream inundation mapping EAP data for Elephant Butte and Caballo Dams and will provide that to Tectonic/JEFuller. No other downstream inundation mapping exists for all of the other structures and will likely be a mitigation action in the updated Plan.
  - **Drought**: No significant discussion
  - **Earthquake:** All of the data would indicate that DAC is in a relatively low hazard seismic risk area. Based on a review of the profile data and history, the Steering Committee chose to drop Earthquake from the hazard list.
  - **Flood:** The steering committee discussed using the Q3 data (which is based on 1998 FIRM data) versus the new DFIRM data (which reflects SFHAs that were mapped to reflect the non-certified levees along the Rio Grande). The overall consensus was to stick with Q3 data except for possibly the City of Las Cruces, which may choose to use the new DFIRM data. NMSU may also provide some additional hand delineated flood hazard areas that are not currently mapped as FEMA SFHAs.
  - **Severe Wind:** No significant discussion.
  - **Wildfire:** S. Ogden presented a wildfire risk map developed by the state in 2006 as a candidate for the profile. The draft CWPP was also discussed and M. Villa stated the draft report is due for submittal by the end of February or early March 2012. Draft fuel hazard data layers have been developed and could be used in lieu of the state coverage. The Steering Committee chose to go with the draft CWPP data. M. Villa will coordinate the provision of that data to Tectonic/JEFuller.
  - **Extreme Cold**: Based on recent events and a sporadic history of extreme cold events, K. Doolittle and G. Haubold requested that "Extreme Cold" be added to the list, and that NMSU would be responsible for developing the mitigation actions/projects for that hazard. The Steering Committee agreed and "Extreme Cold" will be added to the Plan list. K. Doolittle will pull together NMSU related event descriptions and loss data for the Feb 2011 event. M. Villa will look into providing the loss reports collected by their agency for the February 2011 event.

- Tectonic/JEFuller will provide an electronic copy of the historic hazard event database to the Steering Committee for review and augmentation. All comments, additions, or modifications are due by February 27, 2012.

Agenda Item 3b:

- S. Ogden presented an overview and instructions for the Critical Priority Risk Index (CPRI) and its intended use in the Plan update. Each jurisdiction will need to provide a CPRI evaluation for all of the Plan hazards. Tectonic/JEFuller will provide a worksheet for each jurisdiction to use for the exercise.

Agenda Item 3c:

- S. Ogden led a discussion/presentation on the development of a critical facility and infrastructure (CFI) database for the county and communities. A working definition of what constitutes a critical facility was discussed and a template/example worksheet of the minimum data needed for each facility compiled was reviewed and discussed.
- The Steering Committee reviewed the CFI and risk assessment data provided in the 2004 Plan. O. Fierro had also previously provided some fairly recent lists of CFI identified for other efforts. Tectonic/JEFuller will take these two lists and compile a start on a CFI database and provide it to O. Fierro for completion.
- Each jurisdiction was encouraged to identify CFI within their boundaries and provide the data to O. Fierro for delivery to Tectonic/JEFuller.
- All CFI data will need to be provided by no later than February 20, 2012.

Agenda Item 3d:

- S. Ogden led a discussion/presentation on the purpose and need for a Development Trend Analysis. The Steering Committee reviewed the very brief evaluation in the 2004 Plan to begin with.
- S. Ogden explained that the Plan must provide a hazard assessment of development trends and in particular, 5-year periods of past and future development. Each jurisdiction was instructed to provide a brief narrative of development over the past 5-year period and anticipated development over the next 5-years. Jurisdictions were encouraged to look at general and comprehensive plans for help with this task.
- Tectonic/JEFuller will use these paragraphs and descriptions to perform a risk assessment for each hazard.

Agenda Item 4:

- S. Ogden presented an overview of the process the Steering Committee will use to update the Mitigation Strategy portion of the Plan. The first step of that process will involve an assessment of the 2004 Plan's mitigation actions/project (A/Ps).
- The Steering Committee briefly reviewed the mitigation A/Ps listed in the 2004 Plan.

- S. Ogden presented and explained a worksheet that each jurisdiction shall use to perform an assessment of the 2004 Plan mitigation A/Ps and worked through an example assessment.
- Worksheets will be provided to all of the 2004 Plan participants for use in performing the assessment. Each jurisdiction shall complete the worksheet and return it to O. Fierro for delivery to Tectonic/JEFuller.

Agenda Item 5:

- Action Items for this meeting are summarized below and were summarized at the close of the meeting.
- The next planning team meeting (Meeting No. 3) is scheduled for: ***March 13, 2012, from 8:30am to 12:30pm at the Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.***

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
2-1	D. Macial to provide a GIS shapefile of the EBID boundary to O. Fierro for delivery to Tectonic/JEFuller.	D. Macial [2/20/12]
2-2	K. Doolittle or G. Haubold to provide a GIS shapefile of NMSU property boundaries to O. Fierro for delivery to Tectonic/JEFuller.	K. Doolittle / G. Haubold [2/20/12]
2-3	M. Villa to provide EAP related inundation mapping for Elephant Butte and Caballo Dams. GIS shapefile data will be provided if available. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]
2-4	JD Padilla (City of Las Cruces) to provide DFIRM data for use in the city limits if desired. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	JD Padilla [2/20/12]
2-5	M. Villa to coordinate with SWCA to provide the draft CWPP fuel hazard layer data to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]
2-6	K. Doolittle or G. Haubold will provide NMSU related event description and loss estimates for the Feb 2011 extreme cold event to Tectonic/JEFuller	K. Doolittle / G. Haubold [2/20/12]
2-7	M. Villa will provide loss reports compiled by his agency for the Feb 2011 extreme cold event. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]
2-8	Tectonic/JEFuller will provide an electronic version of the historic hazard event database to O. Fierro for distribution to the Steering Committee for review and augmentation, as appropriate	Tectonic/JEFuller [1/30/12]

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
2-9	All jurisdictions are to review the historic hazard event database and provide comments, additions, and/or modifications to Tectonic/JEFuller.	All Jurisdictions [2/27/12]
2-10	Tectonic/JEFuller will provide an electronic version of the CPRI worksheet to O. Fierro for distribution to and completion by each of the participating jurisdictions	Tectonic/JEFuller [1/30/12]
2-11	All jurisdictions shall perform a CPRI evaluation of all the Plan hazards using the CPRI worksheet provided by Tectonic/JEFuller.	All Jurisdictions [3/5/12]
2-12	Tectonic/JEFuller will: 1) Compile an initial CFI database using lists provided by O. Fierro and provide it to DAC for completion(in particular, the identification of lat-long coordinates and replacement costs). 2) Provide a digital CFI worksheet for use by all other participating jurisdictions to use in compiling their CFI data.	Tectonic/JEFuller [2/3/12]
2-13	All jurisdictions will complete the CFI database and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/20/12]
2-14	Each jurisdiction shall provide a brief description of development trends for the last 5 year period and the anticipated development areas for the next 5 year period. Descriptions shall be provided to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/27/12]
2-15	Tectonic/JEFuller will deliver jurisdiction specific worksheets for assessing the 2004 Plan mitigation A/Ps to O. Fierro for distribution to the jurisdictions.	Tectonic/JEFuller [1/30/12]
2-16	All jurisdictions except the City of Anthony, EBID, and NMSU will complete the 2004 Plan mitigation A/P assessment worksheets and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions (except as noted) [3/5/12]

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
PT-1	The DAC Flood Commission will coordinate with the Village of Hatch to determine Hatch's involvement status in the update.	DAC Flood Commission [12/22/11]	NC	NA	NA	NA	NA	NA	NA	NA	•
PT-2	Tectonic/JEF will coordinate with Tambri Hunteman to obtain the needed GIS data.	Tectonic /JEFuller T. Hunteman [12/22/11]	IP	NA	NA	NA	NA	NA	NA	NA	• 12/22/11 – files uploaded to DAC ftp site by Tambri • 1/12/12 – Have downloaded all files except aerials. Waiting on DAC to upload to Tectonic ftp site.
PT-3	M. Villa will coordinate with T. Hunteman to provide an up-to-date list of critical facilities to Tectonic/JEFuller	M. Villa [12/22/11]	IP	NA	NA	NA	NA	NA	NA	NA	• 12/22/11 – some GIS files were uploaded to ftp site Tambri. Still need list from Michael. • 1/5/12 – Orlando provided multiple pdf lists of critical facilities. Sent reply stating that we still need lat-long and replacement cost data.
1-1	Print and review the current 2004 Plan and bring copy to every meeting.	All Jurisdictions [12/22/11]	C	C	C	C	C	C	C	C	• Assumed to be completed by all.
1-2	Tectonic/JEFuller will email electronic version of Local Resources List template to each jurisdiction to track contributors to the plan update at the local level that do not attend SC meetings.	Tectonic /JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/19/11 – template provided to Orlando at DAC via email, for distribution to steering committee.
1-3	Each jurisdiction shall record and document all people contacted or involved as a planning resource at the local level, using the template provided by Tectonic/JEFuller	All Jurisdictions [4/1/12]	NC	NC	NC	NC	NC	NC	NC	NC	•

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
1-4	O. Fierro will send out organization invitations using the template provided by Tectonic/JEFuller via either email or letter.	O. Fierro [1/6/12]	NC	NA	NA	NA	NA	NA	NA	NA	•
1-5	Tectonic/JEFuller will provide template newspaper article and website posting language to the SC for use in the public involvement announcements	Tectonic /JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/19/11 – template provided to Orlando at DAC via email.
1-6	Each jurisdiction will coordinate a posting of the public notice to their respective website.	All Jurisdictions [12/22/11]	C	NC	C	NC	NC	NC	NC	NC	• 12/22/11 – DAC, EBID website posting is up.
1-7	DAC Flood Commission will publish an article in the January 8, 2012 Sunday edition of the local newspapers announcing the start of the update process and providing contact information for interested citizens. Copies of the news articles will be obtained by DAC Flood Commission and provided to Tectonic/JEFuller for documentation purposes.	DAC Flood Commission [1/8/12]	C	NA	NA	NA	NA	NA	NA	NA	• 1/9/12 – Two articles were published. One in the Friday 1/6/12 paper and one in the 1/8/12 paper.

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
1-8	DAC Flood Commission will coordinate with the incorporated communities to present an overview of the plan update process in a public hearing setting as needed and desired by the communities. All public hearings will be scheduled and conducted prior to the end of March 2012. Copies of the meeting minutes, agendas and announcements will be provided to Tectonic/JEFuller for documentation in the plan.	DAC Flood Commission and Jurisdictions [3/31/12]	NC	NA	NA	NA	NA	NA	NA	NA	•

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
David Almaguer	Dona Ana County	Law & Safety Department - Office of Emergency Management	Emergency Mgmt Supervisor	575-647-7928		davidal@donaanacounty.org
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Lloyd Burns	Village of Hatch	Board of Trustees	Trustee	575-267-5216		mayor@villageofhatch.org
Raymond Carr	New Mexico State University	Geography Department	GIS Analyst	575-646-5755		bikerac@nmsu.edu
Mike Castillo	Village of Hatch	Public Works Department	Director	575-267-5216		pwd@villageofhatch.org
Katrina Doolittle	New Mexico State University	Environmental Health & Safety	Director	575-646-3327		kadoolit@ad.nmsu.edu
Paul Dugie	Dona Ana County	Community Services Department - Office of the Flood Commission	Director	575-525-5558		pauld@donaanacounty.org
Lorenzo Espinoza	State of New Mexico	Department of Homeland Security and Emergency Management	Local Preparedness Coordinator	575-589-6501 ; 12		lorenzo.espinoza@state.nm.us
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Glen Haubold	New Mexico State University	Facilities and Services	Assistant Vice President			ghaubold@ad.nmsu.edu
Roger Hedrick	Dona Ana County	Community Services Department - Community Development	Deputy Director	575-312-6631		rogerh@donaanacounty.org
Kevin Hoban	Town of Mesilla	Fire Department		575-523-1311		kevinhoban@msn.com
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Richard P. Kummerle	Tectonic Engineering & Surveying Consultants, P.C.		Project Principal	800-829-6531	914-456-5550	rpkummerle@tectonicengineering.com
Patrick Lopez	Elephant Butte Irrigation District	SCADA - Hydrology - Water Quality	Supervisor	575-526-6671		patlopez@ebid-nm.org
Debbie Lujan	Town of Mesilla	Public Works Department	Director	575-524-3262 x 103		dlujan@comcast.net
Delyce Maciel	Elephant Butte Irrigation District		HR/SAFETY DIRECTR	575-526-6671 x 411	575 650 2477	dmaciel@ebid-nm.org
Edward Martella	Tectonic Engineering & Surveying Consultants, P.C.		Vice President / Project Mgr	804-217-8504	804-334-0896	efmartella@tectonicengineering.com
Scott Ogden	JE Fuller/ Hydrology & Geomorphology, Inc.		Project Mgr / Senior Engineer	480-222-5717	480-299-3394	scott@jefuller.com
J.D. Padilla	City of Las Cruces		Floodplain Administrator	575-528-3131		jdpadilla@las-cruces.org
Dwaine Solana	City of Sunland Park	Community Development	Building Inspector	575-589-6912 915-487-9562	9154879562	dsolana@cityofsunlandpark-nm.org
Michael Villa	Dona Ana County	Law & Safety Department - Office of Emergency Management	OEM Coordinator	575-647-7901		michaelv@donaanacounty.org

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
Miguel Parra	The Ability Center for Independent Living		S.S. Rep Peace	575-526-5016		miguel.parra@theabilitycenter.org
Alexis Zarret	NM Commission for Deaf & Hard of Hearing	Las Cruces Office	Asst / Interpreter	525-1036		alexis.zarret@state.nm.us
Martin Lopez	La clinica de Familia			526 1605		mlopez@lcdfnm.org
Jeff Gray	Town of Mesilla	Marshal's Dept	Marshal	526-4138		jgray_marshal@comcast.net
Diana Murillo	City of Anthony	City Council	City Trustee	882-2980	915 5388798	diana_murillo@rocketmail.com

TECTONIC
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JE FULLER
HYDROLOGY & GEOMORPHOLOGY, INC.

MEETING DATE: March 13, 2012

MEETING TIME: 8:30 AM TO 12:30PM

MEETING LOCATION: Doña Ana County Government Center
Room 1-117 (Multi-Purpose Conference Room)
845 N. Motel Blvd, Las Cruces, New Mexico

DISTRIBUTION: Meeting Attendees

FROM: David Capelli – Tectonic
Scott Ogden – JEFuller

RE: **Doña Ana County All Hazard Mitigation Plan**
Steering Committee Meeting No. 3

ATTENDEES:
David Almaguer – DAC Emergency Management Supervisor
Wendy Blackwell – New Mexico State Hazard Mitigation Officer
David Cappelli – Tectonic Senior Security / EOP Specialist
Mike Castillo – Village of Hatch Public Works Director
Katrina Doolittle – NMSU Health & Safety Director
Lorenzo Espinoza – State of NM Emergency Mgmt
Orlando Fierro – DAC Flood Commission Planner/CRS Coordinator
Betty Gonzalez – City of Anthony Trustee
Todd Gregory – Las Cruces Public Schools Safety & Security Coord.
John Gwynne – DAC Flood Commission Engineer Supervisor
Jeff Harris – Las Cruces Public Schools Technical Support Director
Glen Haubold – NMSU Facilities & Services Asst Vice President
Kevin Hoban – Town of Mesilla Fire Department
Daniel Hortert – DAC Community Development Planner
Martin Lopez – La Clinica de Familia Representative
Debbie Lujan – Town of Mesilla Public Works Director
Delyce Macial – Elephant Butte Irrigation District HR / Safety Director
Scott Ogden – JE Fuller Project Manager
J. D. Padilla – City of Las Cruces Floodplain Administrator
Michael Villa – DAC Emergency Management Coordinator

NOTE: No Representation from City of Sunland Park

AGENDA

1. **TASK ASSIGNMENT STATUS REVIEW (8:30AM – 9:00AM)**
2. **MITIGATION STRATEGY TOPICS**

   a. NFIP Statistics and Compliance (9:00AM – 9:15AM)
   b. Repetitive Loss Properties (9:15AM – 9:30AM)
   c. Capability Assessment (9:30AM – 9:45AM)
      i. Legal and Regulatory (Codes / Ordinances / Plans / Manuals / Guidelines)
      ii. Administrative and Technical Staff Resources
      iii. Fiscal Capabilities
3. PLANNING PROCESS TOPICS
   a. Plan Integration and Incorporation (9:45AM – 10:15AM)
      i. Past Plan Cycle
      ii. Future Strategy
4. PLAN MAINTENANCE STRATEGY (10:30AM – 11:30AM)
   a. Review/Discuss maintenance and monitoring over the last plan cycle
   b. Develop New Monitoring Schedule
   c. Plan Update Schedule
   d. Continued Public Involvement
5. PROMULGATION PROCESS (11:30AM – 11:45AM)
6. CLOSING ITEMS (11:45AM - NOON)
   a. Schedule Next Meeting
   b. Summarize Action Items / Task Assignments

DISCUSSION

Agenda Item 1:

- S. Ogden conducted a brief review of the outstanding task items and reiterated the importance of completing the assignments in timely manner and getting that information to O. Fierro at DACFC as soon as possible. The task item status as of March 12, 2012 is included at the end of these notes.
- It was noted that no representative for the Town of Sunland Park was in attendance. S. Ogden reiterated the importance of attendance at all meetings and the very real potential for a community to be non-approvable without the attendance. O. Fierro will coordinate with Sunland Park to ensure they understand and attend if they still want to be part of the Plan.
- Items of note that were discussed during the status review include:
  - **Action Item No. 1-3** – S. Ogden reiterated what is required for this task and will resend (via O. Fierro) the template worksheet for all to complete.
  - **Action Item No. 2-3** – M. Villa stated that USBR will not release the GIS files and that DAC OEM is restricted from publishing any of the EAP hard copy maps they have. S. Ogden proposed that DAC OEM provide digital scans of the appropriate maps to Tectonic/JEFuller. S. Ogden will digitize the boundaries and use in the vulnerability analysis, but not include the areas on any maps. DAC officials were in agreement and M. Villa will work with O. Fierro to deliver the scanned maps to Tectonic/JEFuller by no later than COB 3/23/12.

- **Action Item No. 2-4** – JD Padilla confirmed that Las Cruces will use the latest DFIRM data and will provide that data by no later than COB 3/23/12.
- **Action Item No. 2-13** – O. Fierro confirmed that CFI database was nearly complete and would be provided by no later than COB 3/23/12.
- **Action Item No. 2-14** – S. Ogden reiterated the importance of these write-ups as a part of the vulnerability analysis. All will be due by no later than COB 3/23/12.
- **Action Item No. 2-16** – S. Ogden reiterated that these must be completed by every jurisdiction in the 2004 Plan for the 2012 Plan to pass. S. Ogden used the Village of Hatch worksheet as an example.

Agenda Item 2a:

- S. Ogden reviewed the DMA 2000 requirements for addressing participation and compliance with the NFIP. A table with NFIP statistics was presented and reviewed by the Steering Committee. A questionnaire worksheet will be used to address the continued compliance with the NFIP for each jurisdiction. The worksheet will be provided to the Steering Committee by Tectonic/JEFuller via O. Fierro.

Agenda Item 2b:

- S. Ogden presented repetitive loss statistics for the county, as provided by DAC Flood Commission and dated January 31, 2011. O. Fierro confirmed that the data was still correct and that the county is looking into ways to mitigate the properties. S. Ogden suggested that any projects could be added to the mitigation strategy as a specific action/project.

Agenda Item 2c:

- S. Ogden led a discussion/presentation on the purpose and scope of a capability assessment in a hazard mitigation plan. He pointed out that no assessment was done for the 2004 Plan, but would be required for this plan update.
- S. Ogden presented a worksheet with a series of tables that will be used to document the capability assessment. Tables summarizing legal and regulatory tools, staff capacity, and fiscal resources were presented and discussed, along with an example document. Tectonic/JEFuller will provide a template worksheet to each jurisdiction via O. Fierro, for their completion and return.

Agenda Item 3a:

- S. Ogden led a discussion/presentation on the plan integration requirements of DMA 2000. He then polled the Steering Committee to discuss and summarize the ways the 2004 Plan has been integrated and/or referenced into other planning mechanisms used by the jurisdictions. This discussion excluded the City of Anthony, EBID, and NMSU as they were not participating jurisdictions in the 2004 Plan. Areas of incorporation were noted and will be summarized in the 2012 Plan.
- Challenges and/or reasons for not incorporating the 2004 Plan were discussed and documented.

- The Steering Committee then identified both general and specific mechanisms that would be target candidates for integrating / referencing the 2012 Plan.
- The results of these discussions will be documented in the 2012 Plan and a draft of the section will be provided to the Steering Committee for review and comment.

Agenda Item 4a and 4b:

- S. Ogden presented an overview of the plan maintenance requirements of DMA2000 and the specific elements that must be addressed and redefined with the 2012 Plan.
- The Steering Committee reviewed the plan monitoring and evaluation schedule and scope outlined in the 2004 Plan and then reported out on the execution, or lack thereof, of those elements. Challenges / reasons for not executing the stated maintenance goals were discussed.
- The Steering Committee discussed and developed a new schedule and scope for the monitoring and evaluation, and defined lines of responsibility for ensuring that the actions are accomplished. DAC Flood Commission and OEM will jointly lead the effort.
- The results of these discussions will be documented in the 2012 Plan and a draft of the section will be provided to the Steering Committee for review and comment.

Agenda Item 4c:

- The Steering Committee discussed the a procedure for beginning the official update of the Plan.
- W. Blackwell noted that pursuit of any grant funding should occur 2-years in advance of the plan expiration date, as most grants take a year to process and fund. The Steering Committee defined a schedule of events and a general scope of task items for updating the Plan at the end of the 5 year cycle. DAC Flood Commission and OEM will jointly take responsibility for seeing that process accomplished.
- The results of these discussions will be documented in the 2012 Plan and a draft of the section will be provided to the Steering Committee for review and comment.

Agenda Item 4d:

- The Steering Committee reviewed the continued public involvement items in the 2004 Plan and then reported out on the execution, or lack thereof, of those items. Challenges / reasons for not executing the stated continued public involvement items were discussed and are essentially the same as those identified previously for the plan integration and the monitoring and evaluation.
- S. Ogden led the Steering Committee in brainstorming session to identify other ways that the county and communities engage the public with hazard mitigation related messages and materials.
- Using these past occurrences as sources and seed ideas, the Steering Committee then brainstormed potential ways and future activities wherein the 2012 Plan and hazard mitigation messages and materials could be used to engage the public.

- The results of these discussions will be documented in the 2012 Plan and a draft of the section will be provided to the Steering Committee for review and comment.

Agenda Item 5:

- This item was tabled until the next meeting due to lack of time.

Agenda Item 6:

- Action Items for this meeting are summarized below and were summarized at the close of the meeting.
- The next planning team meeting (Meeting No. 4) is scheduled for: ***April 19, 2012, from 9:00am to 4pm at the Doña Ana County Government Center, Room 1-117 (Multi-Purpose Conference Room), 845 N. Motel Blvd, Las Cruces, New Mexico.***

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
3-1	Tectonic/JEFuller will provide the NFIP continue compliance worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]
3-2	All jurisdictions except the City of Anthony, EBID and NMSU must complete the NFIP compliance worksheet and return to O. Fierro for delivery to Tectonic/JEFuller	DAC, Hatch, Las Cruces, Mesilla, and Sunland Park [4/13/12]
3-3	Tectonic/JEFuller will provide the capability assessment worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]
3-4	All jurisdictions shall complete the capability assessment worksheet and provide the completed worksheet to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]
3-5	Tectonic/JEFuller will provide drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]
3-6	All jurisdictions shall review the drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan, and provide all comments to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
David Almaguer	Dona Ana County	Law & Safety Department - Office of Emergency Management	Emergency Mgmt Supervisor	575-647-7928		davidal@donaanacounty.org
Chris Brown	New Mexico State University	Geography Department / Spatial Apps Research Center	Department Head / Director			brownchr@nmsu.edu
Lloyd Burns	Village of Hatch	Board of Trustees	Trustee	575-267-5216		mayor@villageofhatch.org
David Cappelli	Tectonic Engineering & Surveying Consultants, P.C.		Senior Security / EOP Specialist	804-217-8504	804--836-8370	dcappelli@tectonicengineering.com
Raymond Carr	New Mexico State University	Geography Department	GIS Analyst	575-646-5755		bikerac@nmsu.edu
Mike Castillo	Village of Hatch	Public Works Department	Director	575-267-5216		pwd@villageofhatch.org
Katrina Doolittle	New Mexico State University	Environmental Health & Safety	Director	575-646-3327		kadoolit@ad.nmsu.edu
Paul Dugie	Dona Ana County	Community Services Department - Office of the Flood Commission	Director	575-525-5558		pauld@donaanacounty.org
Lorenzo Espinoza	State of New Mexico	Department of Homeland Security and Emergency Management	Local Preparedness Coordinator	575-589-6501 x 122	505 699-9323	lorenzo.espinoza@state.nm.us
Orlando V. Fierro	Dona Ana County	Community Services Department - Office of the Flood Commission	Planner / CRS Coordinator	575-525-5558		orlandof@donaanacounty.org
Jeff Gray	Town of Mesilla	Marshal's Department	Marshal	575-526-4138		jgray_marshal@comcast.net
Andrew Guerra	Bohannan Huston		Engineer	575-532-8670		aguerra@bhinc.com
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Betty Gonzalez	"	"	"	882-3348		bybetty@aol.com

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
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MEETING DATE: April 19, 2012

MEETING TIME: 9:00 AM TO 5:00 PM

MEETING LOCATION: Doña Ana County Government Center
County Commission Chambers
845 N. Motel Blvd, Las Cruces, New Mexico

DISTRIBUTION: Meeting Attendees

FROM: David Capelli – Tectonic
Scott Ogden – JEFuller

RE: **Doña Ana County All Hazard Mitigation Plan**
Steering Committee Meeting No. 4

ATTENDEES: David Almaguer – DAC Emergency Management Supervisor
David Cappelli – Tectonic Senior Security / EOP Specialist
Mike Castillo – Village of Hatch Public Works Director
Katrina Doolittle – NMSU Health & Safety Director
Orlando Fierro – DAC Flood Commission Planner/CRS Coordinator
Todd Gregory – Las Cruces Public Schools Safety & Security Coord.
Kevin Hoban – Town of Mesilla Fire Department
Delyce Macial – Elephant Butte Irrigation District HR / Safety Director
Diana Murillo – City of Anthony Trustee
Scott Ogden – JE Fuller Project Manager
J. D. Padilla – City of Las Cruces Floodplain Administrator
Dwaine Solana – City of Sunland Park
Michael Villa – DAC Emergency Management Coordinator

NOTE: Hatch Representative (M. Castillo) left 10 minutes after meeting began and did not return.

AGENDA

1. **TASK ASSIGNMENT STATUS REVIEW (9:00AM – 9:30AM)**
2. **RISK ASSESSMENT TOPICS**
    a. **Vulnerability Analysis Review and Discussion (9:30AM - 11:30AM)**
3. **MITIGATION STRATEGY TOPICS**
    a. **Goals (11:30AM - NOON)**
        i. **Review current plan goals**
        ii. **Formulate goals for updated plan**
    b. **Mitigation Actions/Projects (1:00PM – 2:30PM)**
        i. **Action/Project Identification**

1. **Repetitive Loss Structures Recommendations**

ii. **Implementation Strategy**

4. **PROMULGATION PROCESS (2:30PM – 3:00PM)**
5. **CLOSING ITEMS (3:00PM – 3:15PM)**
   a. **Summary of Task Assignments**
6. ***OPTIONAL COMMUNITY ASSISTANCE TIME (3:15PM – 5:00PM)*: Tectonic/JEFuller worked with jurisdictions needing assistance to complete any of the task assignments**

DISCUSSION

Agenda Item 1:

- S. Ogden conducted a brief review of the outstanding task items and reiterated the importance of completing the assignments in order to maintain eligibility in the Plan. The task item status as of April 18, 2012 is included at the end of these notes.
- It was noted that M. Castillo, the only representative for Hatch, left the meeting after the first 10-minutes and did not return. S. Ogden noted that Hatch has many outstanding items that require completion and is in severe jeopardy of being dropped from the Plan.
- Items of note that were discussed during the status review include:
  - **Action Item No. 1-3** – S. Ogden reiterated what is required for this task and noted that these worksheets are now due.
  - NMSU had completed Action Item Nos. 3-4 and 3-6.

Agenda Item 2a:

- S. Ogden presented the results of the vulnerability analysis for the Dam Failure, Flood, and Wildfire hazards. Maps depicting critical facility locations plotted over hazard areas were provided on a county-wide basis as well as for each jurisdiction.
- Tables summarizing the estimated losses and exposure to critical facilities, general residential structures and population were also presented and discussed.
- S. Ogden explained how the 2010 Census based population and residential building exposure counts were derived and the process used to assign the replacement costs to the Census building estimates.
- The following were noted from the discussion:
  - NMSU has a ranch (the Chihuahuan Desert Rangeland Research Center) that it owns and operates. The VA needs to reflect the ranch boundaries and ownership by NMSU. M. Villa will provide GIS information for the ranch boundaries.
  - EBID would like to have their facilities evaluated for exposure to wildfire risk as well. Also would like to see canals listed by piped and open categories. D. Macial will check into the unit replacement costs assumed by JEFuller and provide updates.

Agenda Item 3a:

- S. Ogden led the Steering Committee in a review of 2004 Plan goals as well as the 2010 State of New Mexico Hazard Mitigation Plan goals. Prior crosswalk review comments from FEMA strongly recommended that the 2004 Plan goals be revisited as they were too detailed and read more like a list of objectives. The Steering Committee agreed and chose to start over.
- The Steering Committee worked through a problem statement session wherein problems and challenges regarding natural hazards and their mitigation, were brainstormed and documented. A total of 11 general problem statements were developed.
- The Steering Committee then used these problem statements, with guidance from the State Plan goals and other example sources, to formulate a list of five goals for the Plan, listed below in no particular order:
    1. Improve hazard mitigation communication and collaboration with federal, state, local, other governmental agencies, and private sector organizations and stakeholders.
    2. Promote disaster-resistant future development.
    3. Promote public understanding, support, and demand for hazard mitigation.
    4. Reduce or eliminate the risk to people and property from natural hazards by developing community resiliency.
    5. Explore all internal and external avenues to fund mitigation activities.

Agenda Item 3b:

- S. Ogden provided an overview of the process for updating the mitigation strategy and specifically the mitigation action/project formulation and implementation strategy. The review included an explanation of the various categories of possible mitigation actions/projects.
- S. Ogden presented the worksheet that will be used to document the actions/projects and implementation strategy and explained each of the data columns needed for completion of the worksheet. Instructions were given regarding the formulation of actions/projects and a few example projects were compiled in a work session format.
- Tectonic/JEFuller will provide a digital copy of the worksheet to each jurisdiction for their completion. Actions/projects from the 2004 Plan that were designated as "Keep" or "Revise" in the assessment worksheet (See Action Item No. 2-16) will be pre-entered into the worksheet for those jurisdictions that participated in the 2004 Plan.
- Repetitive loss structures and potential mitigation actions/projects were briefly discussed.

- Each jurisdiction was instructed to complete the worksheet per the guidelines discussed during the meeting and provide to O. Fierro for delivery to Tectonic/JEFuller.

Agenda Item 4:

- S. Ogden led a discussion/presentation on the promulgation schedule and process that will take place following this last meeting, summarized as follows:
  - Prepare Draft and Submit to Steering Committee for review (Target = 5/18/12)
  - Steering Committee comments will be due by COB 6/1/12 (2 weeks).
  - Final Draft Plan to NMDHSEM by COB 6/8/12
  - NMDHSEM review 3 to 4 weeks according to Wendy Blackwell. Hopefully we can interactively address comments.
  - Anticipated FEMA ready Final Draft to NMDHSEM for submittal to FEMA by COB 7/6/12.
  - FEMA Review (assume 60 days). Hopefully we can interactively address comments during that period.
  - Address FEMA comments and resubmit (if needed)
  - FEMA will issue an "Approvable Pending Adoption" letter (September 2012?).
  - Tectonic/JEFuller will provide Final hard copies of Plan with digital copies on enclosed CD.
  - Each jurisdiction works to get resolution approved by Board/Council as soon as possible. Resolutions will be provided to O. Fierro, who will then forward to the NMDHSEM for delivery to FEMA and final plan approval.

Agenda Item 5:

- Action Items for this meeting are summarized below and were summarized at the close of the meeting.

ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
4-1	M. Villa to provide NMSU Chihuahuan Desert Rangeland Research Center boundaries in GIS format to O. Fierro for distribution to Tectonic/JEFuller.	M. Villa [4/27/12]
4-2	D. Macial of EBID will check into unit replacement cost estimates for EBID facilities and provide to O. Fierro for delivery to Tectonic/JEFuller	D. Macial [4/27/12]
4-3	Tectonic/JEFuller will provide the mitigation action/project worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [4/23/12]

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ACTION ITEM SUMMARY:

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]
4-4	All jurisdictions shall complete the mitigation action/project worksheet and provide the completed worksheet to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [5/11/12]

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ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
PT-1	The DAC Flood Commission will coordinate with the Village of Hatch to determine Hatch's involvement status in the update.	DAC Flood Commission [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 1/24/12 – Orlando will follow-up with Hatch to determine status. • 3/13/12 – Orlando verified that Hatch will participate
PT-2	Tectonic/JEF will coordinate with Tambri Hunteman to obtain the needed GIS data.	Tectonic /JEFuller T. Hunteman [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 12/22/11 – files uploaded to DAC ftp site by Tambri • 1/12/12 – Have downloaded all files except aerials. Waiting on DAC to upload to Tectonic ftp site. • 1/23/12 – Will get data while at DAC. • 1/24/12 – Obtained list of data from Tambri following meeting No. 2
PT-3	M. Villa will coordinate with T. Hunteman to provide an up-to-date list of critical facilities to Tectonic/JEFuller	M. Villa [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 12/23/11 – some GIS files were uploaded to ftp site Tambri. See next list from Michael. • 1/3/12 – Orlando provided multi-pt. pdf listing critical facilities. Sent reply stating that we still need lat/long and replacement cost data. • 1/24/12 – Task completed and new assignment given (see below).
1-1	Print and review the current 2004 Plan and bring copy to every meeting.	All Jurisdictions [12/22/11]	C	C	C	C	C	C	C	C	• Assumed to be completed by all.
1-2	Tectonic/JEFuller will email electronic version of Local Resources List template to each jurisdiction to track contributors to the plan update at the local level that do not attend SC meetings.	Tectonic /JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/19/11 – template provided to Orlando at DAC via email, for distribution to steering committee
1-3	Each jurisdiction shall record and document all people contacted or involved as a planning resource at the local level, using the template provided by Tectonic/JEFuller	All Jurisdictions [4/1/12]	C	NC	NC	NC	NC	NC	C	NC	• 3/19/12 – DAC provided list via email from Orlando • 4/18/12 – NMSU provided list via email from Orlando.

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

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ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
1-4	D. Fierro will send out organization invitations using the template provided by Tectonic/JEFuller via either email or letter.	D. Fierro [1/6/12]	C	NA	NA	NA	NA	NA	NA	NA	• 1/20/12 – Orlando provided invitation letter to all jurisdictions. • 2/1/12 – Orlando provided documentation of all entities originally invited to the first meeting in December 2011.
1-5	Tectonic/JEFuller will provide template newspaper article and website posting language to the SC for use in the public involvement announcements	Tectonic /JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/19/11 – template provided to Orlando at DAC via email.
1-6	Each jurisdiction will coordinate a posting of the public notice to their respective website.	All Jurisdictions [12/22/11]	C	NA	C	NC	C	NC	C	NC	• 12/22/11 – DAC, EBID website posting is up. • 1/12/12 – Orlando sent reminder to all jurisdictions. • 1/23/12 – Las Cruces and NMSU website posting is up. • 2/18/12 – Hatch, Mesilla, and Sunland Park will not be posting website notices.
1-7	DAC Flood Commission will publish an article in the January 8, 2012 Sunday edition of the local newspapers announcing the start of the update process and providing contact information for interested citizens. Copies of the news articles will be obtained by DAC Flood Commission and provided to Tectonic/JEFuller for documentation purposes.	DAC Flood Commission [1/8/12]	C	NA	NA	NA	NA	NA	NA	NA	• 1/9/12 – Two articles were published. One in the Friday 1/6/12 paper and one in the 1/8/12 paper.
1-8	DAC Flood Commission will coordinate with the incorporated communities to present an overview of the plan update process in a public hearing setting as needed and desired by the communities. All public hearings will be scheduled and conducted prior to the end of March 2012. Copies of the meeting minutes, agendas and announcements will be provided to Tectonic/JEFuller for documentation in the plan.	DAC Flood Commission and Jurisdictions [3/31/12]	NC	NA	NA	NA	NA	NA	NA	NA	• 4/11/12 – No public hearings conducted as of this date. Will be done if needed. Closing out task.
2-1	D. Macial to provide a GIS shapefile of the EBID boundary to D. Fierro for delivery to Tectonic/JEFuller	D. Macial [2/20/12]	NA	NA	C	NA	NA	NA	NA	NA	• 2/28/12 – shapefiles provided by EBID via email through Orlando.

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
2-2	K. Doolittle or G. Haubold to provide a GIS shapefile of NMSU property boundaries to O. Fierro for delivery to Tectonic/JEFuller.	K. Doolittle / G. Haubold [2/20/12]	NA	NA	NA	NA	NA	NA	C	NA	• 2/20/12 – shapefiles provided by NMSU via Orlando.
2-3	M. Villa to provide EAP related inundation mapping for Elephant Butte and Caballo Dams. GIS shapefile data will be provided if available. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 3/20/12 – DAC provided scanned maps via emails from Orlando
2-4	JD Padilla (City of Las Cruces) to provide DFIRM data for use in the city limits if desired. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	JD Padilla [2/20/12]	NA	NA	NA	NA	C	NA	NA	NA	• 3/15/12 – Received the flood coverage from JD via 3nd email from Orlando.
2-5	M. Villa to coordinate with SWCA to provide the draft CWPP fuel hazard layer data to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 3/6/12 – Received draft files from SWCA via an email
2-6	K. Doolittle or G. Haubold will provide NMSU related event description and loss estimates for the Feb 2011 extreme cold event to Tectonic/JEFuller	K. Doolittle / G. Haubold [2/20/12]	NA	NA	NA	NA	NA	NA	C	NA	• 2/28/12 – NMSU provided descriptions and loss estimates for Feb 2011 event via email through Orlando
2-7	M. Villa will provide loss reports compiled by his agency for the Feb 2011 extreme cold event. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 2/28/12 – Report provided by M. Villa via email through Orlando.
2-8	Tectonic/JEFuller will provide an electronic version of the historic hazard event database to O. Fierro for distribution to the Steering Committee for review and augmentation, as appropriate.	Tectonic/JEFuller [1/20/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/20/12 – files delivered to Orlando for distribution via email.

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
2-9	All jurisdictions are to review the historic hazard event database and provide comments, additions, and/or modifications to Tectonic/JEFuller.	All Jurisdictions [2/27/12]	C	NC	NC	NC	NC	NC	C	NC	• 2/20/12 - NMSU provided specific records via an email through Orlando • 2/27/12 - Historic records for Feb 2012 "freeze" were provided by M. Villa via email through Orlando. • 4/11/12 – Nothing received from Anthony, EBID, Hatch, Las Cruces, Mesilla, or Sunland Park. Closing out task.
2-10	Tectonic/JEFuller will provide an electronic version of the CPRI worksheet to D. Fierro for distribution to and completion by each of the participating jurisdictions	Tectonic/JEFuller [1/30/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – files delivered to Orlando for distribution via email.
2-11	All jurisdictions shall perform a CPRI evaluation of all the Plan hazards using the CPRI worksheet provided by Tectonic/JEFuller.	All Jurisdictions [3/5/12]	C	C	C	NC	C	NC	C	NC	• 2/20/12 – NMSU provided completed worksheet via email through Orlando • 2/23/12 – DAC provided completed worksheet via email from M. Villa through Orlando. • 2/27/12 – Anthony provided completed worksheet via email through Orlando. • 2/28/12 – EBID provided completed worksheet via email through Orlando. • 3/19/12 – Las Cruces provided completed worksheet via email through Orlando.
2-12	Tectonic/JEFuller will: 1) Compile an initial CFI database using lists provided by D. Fierro and provide it to DAC for completion(in particular, the identification of lat long coordinates and replacement costs). 2) Provide a digital CFI worksheet for use by all other participating jurisdictions to use in compiling their CFI data.	Tectonic/JEFuller [2/3/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – CFI template worksheet files delivered to Orlando for distribution via email • 3/30/12 – CFI initial database provided to Orlando via email

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
2-13	All jurisdictions will complete the CFI database and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/20/12]	C	C	C	C	C	C	C	C	• 2/28/12 – NMSU provided CFI database. • 2/29/12 – EBID provided there CFI database. • 3/1/12 – Received an email from Orlando stating he is still working on the database. • 3/20/12 – Las Cruces provided CFI database via email from Orlando. •
2-14	Each jurisdiction shall provide a brief description of development trends for the last 5 year period and the anticipated development areas for the next 5 year period. Descriptions shall be provided to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/27/12]	C	NC	NC	NC	C	NC	C	NC	• 2/20/12 – NMSU provided development trend write-up via email through Orlando. • 3/19/12 – DAC provided profile and development trend write up via email from Orlando. • 3/21/12 – DAC provided ETZ Maps for development trend analysis via an email from Orlando. • 3/22/12 – Las Cruces provided information for development trend analysis via email from Orlando
2-15	Tectonic/JEFuller will deliver jurisdiction specific worksheets for assessing the 2004 Plan mitigation A/Ps to O. Fierro for distribution to the jurisdictions.	Tectonic/JEFuller [1/30/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – files delivered to Orlando for distribution via email.
2-16	All jurisdictions except the City of Anthony, EBID, and NMSU will complete the 2004 Plan mitigation A/P assessment worksheets and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions (except as noted) [3/5/12]	C	NA	NA	NC	C	NC	NA	NC	• 2/23/12 – DAC OEM provided their part of the worksheet. • 2/27/12 – DAC Flood Commission provided the rest of the worksheet. • 3/19/12 – Las Cruces provided the completed worksheet via an email from Orlando.
3-1	Tectonic/JEFuller will provide the NFIP continue compliance worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
3-2	All jurisdictions except the City of Anthony, EBID and NMSU must complete the NFIP questionnaire and return to O. Fierro for delivery to Tectonic/JEFuller	DAC, Hatch, Las Cruces, Mesilla, and Sunland Park [4/13/12]	C	NA	NA	C	NC	NC	NA	NC	• 3/21/12 – DAC provided worksheet via an email from Orlando. • 4/4/12 – Hatch provided worksheet via an email from Orlando.
3-3	Tectonic/JEFuller will provide the capability assessment worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.
3-4	All jurisdictions shall complete the capability assessment worksheet and provide the completed worksheet to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]	C	NC	NC	C	NC	NC	NC	NC	• 4/4/12 – Hatch provided completed worksheet via an email from Orlando • 4/10/12 – DAC provided completed worksheet via an email from Orlando
3-5	Tectonic/JEFuller will provide drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.
3-6	All jurisdictions shall review the drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan, and provide all comments to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]	NC	NC	NC	NC	NC	NC	NC	NC	•

STATUS KEY	(NC) Not Complete	(IP) In Progress	(C) Complete	(NA) Not Assigned

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
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Jeff Gray	Town of Mesilla	Marshal's Department	Marshal	575-526-4138		jgray_marshal@comcast.net
Todd Gregory	Las Cruces Public Schools	Safety & Security	Coordinator	575-527-6653	575-635-5130	tgregory@lcps.k12.nm.us
Andrew Guerra	Bohannan Huston		Engineer	575-532-8670		aguerra@bhinc.com
John Gwynne	Dona Ana County	Community Services Department - Office of the Flood Commission	Engineer Supervisor	575-525-5558		johngw@donaanacounty.org
Jeff Harris	Las Cruces Public Schools	Technical Support Services	Director	575-525-7124	575-636-3023	jharris@lcps.k12.nm.us
Glen Haubold	New Mexico State University	Facilities and Services	Assistant Vice President			ghaubold@ad.nmsu.edu
Roger Hedrick	Dona Ana County	Community Services Department - Community Development	Deputy Director	575-312-6631		rogerh@donaanacounty.org
Kevin Hoban	Town of Mesilla	Fire Department	Chief	575-523-1311		kevinhoban@msn.com
Daniel Hortert	Dona Ana County	Community Services Department - Community Development	Planner	575-525-6113		danielho@donaanacounty.org
Richard P. Kummerle	Tectonic Engineering & Surveying Consultants, P.C.		Project Principal	800-829-6531	914-456-5550	rpkummerle@tectonicengineering.com
Patrick Lopez	Elephant Butte Irrigation District	SCADA - Hydrology - Water Quality	Supervisor	575-526-6671		patlopez@ebid-nm.org
Martin Lopez	La Clinica de Familia			575-526-1105		mlopez@lcdfnm.org

Name	Jurisdiction/Agency/Organization	Department/Division/Branch	Title	Office Phone	Cell Phone	E-Mail Address
Debbie Lujan	Town of Mesilla	Public Works Department	Director	575-524-3262 x 103		dlujan@comcast.net
Delyce Maciel	Elephant Butte Irrigation District		HR / Safety Director	575-526-6671 x 411	575-650-2477	dmaciel@ebid-nm.org
Edward Martella	Tectonic Engineering & Surveying Consultants, P.C.		Vice President / Project Mgr	804-217-8504	804-334-0896	efmartella@tectonicengineering.com
Diana Murillo	City of Anthony	City Council	City Trustee	575-882-2983	915-538-8798	diana_murillo@rocketmail.com
Scott Ogden	JE Fuller/ Hydrology & Geomorphology, Inc.		Project Mgr / Senior Engineer	480-222-5717	480-299-3394	scott@jefuller.com
J.D. Padilla	City of Las Cruces		Floodplain Administrator	575-528-3131		jdpadilla@las-cruces.org
Miguel Parra	The Ability Center for Independent Living		Social Security Payee Advocate	575-526-5016		miguleparra@theabilitycenter.org
Dwaine Solana	City of Sunland Park	Community Development	Building Inspector	575-589-6912	915-487-9562	dsolana@cityofsunlandpark-nm.org
Michael Villa	Dona Ana County	Law & Safety Department - Office of Emergency Management	OEM Coordinator	575-647-7901		michaelv@donaanacounty.org
Alexis Zarret	New Mexico Commission for Deaf and Hard of Hearing	Las Cruces Office	Assistant / Interpreter	575-525-1036		alexis.zarret@state.nm.us

ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
PT-1	The DAC Flood Commission will coordinate with the Village of Hatch to determine Hatch's involvement status in the update.	DAC Flood Commission [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 1/24/12 – Orlando will follow-up with Hatch to determine status. • 3/19/12 – Orlando verified that Hatch will participate
PT-2	Tectonic/JEF will coordinate with Tambri Hunteman to obtain the needed GIS data.	Tectonic /JEFuller T. Hunteman [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 12/22/11 – files uploaded to DAC ftp site by Tambri • 1/12/12 – Have downloaded all files except parcels. Waiting on DAC to upload to Tectonic ftp site. • 1/22/12 – Will get data while at DAC. • 1/24/12 – Obtained list of data from Tambi following meeting No. 2
PT-3	M. Ville will coordinate with T. Hunteman to provide an up-to-date list of critical facilities to Tectonic/JEFuller	M. Ville [12/22/11]	C	NA	NA	NA	NA	NA	NA	NA	• 12/22/11 – some GIS files were uploaded to ftp site Tambri. Still need list from Michael. • 1/3/12 – Orlando provided multiple pdf lists of critical facilities. Sent reply stating that we still need lat-long and replacement cost data. • 1/24/12 – Task completed and new assignment given (see below)
1-1	Print and review the current 2004 Plan and bring copy to every meeting.	All jurisdictions [12/22/11]	C	C	C	C	C	C	C	C	• Assumed to be completed by all.
1-2	Tectonic/JEFuller will email electronic version of Local Resources List template to each jurisdiction to track contributors to the plan update at the local level that do not attend SC meetings.	Tectonic /JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/19/11 – template provided to Orlando at DAC via email for distribution to steering committee

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ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
1-3	Each jurisdiction shall record and document all people contacted or involved as a planning resource at the local level, using the template provided by Tectonic/JEFuller	All Jurisdictions [4/1/12]	C	C	C	C	C	C	C	C	• 3/19/12 – DAC provided list via email from Orlando • 4/18/12 – NMSU provided list via email from Orlando. • 4/19/12 – Anthony, Mesilla, and Sunland Park provided completed worksheets at Mtg No. 4 • 4/27/12 – Las Cruces provided worksheet via an email from Orlando. • 5/3/12 – EBID provided list via email from Orlando • 5/10/12 – Hatch provided list via email from Orlando
1-4	O. Fierro will send out organization invitations using the template provided by Tectonic/JEFuller via either email or letter	O. Fierro [1/6/12]	C	NA	NA	NA	NA	NA	NA	NA	• 1/20/12 – Orlando provided invitation letter to all jurisdictions. • 2/1/12 – Orlando provided documentation of all emails originally invited to the first meeting in December 2011
1-5	Tectonic/JEFuller will provide template newspaper article and website posting language to the DC for use in the public involvement announcements	Tectonic/JEFuller [12/22/11]	NA	NA	NA	NA	NA	NA	NA	NA	• 12/15/11 – Template provided to Orlando at DAC via email.
1-6	Each jurisdiction will coordinate posting of the public notice to their respective website	All Jurisdictions [12/22/11]	C	NA	C	NC	C	NC	C	NC	• 12/22/11 – DAC, EBID website posting is up. • 1/12/12 – Orlando sent reminder to all jurisdictions. • 1/23/12 – Las Cruces and NMSU website posting is up. • 2/16/12 – Hatch, Mesilla, and Sunland Park will not be posting website notices.

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1-7	DAC Flood Commission will publish an article in the January 3, 2012 Sunday edition of the local newspapers announcing the start of the update process and providing contact information for interested citizens. Copies of the news articles will be obtained by DAC Flood Commission and provided to Tectonic/JEFuller for documentation purposes.	DAC Flood Commission [1/6/12]	C	NA	NA	NA	NA	NA	NA	NA	• 1/9/12 – Two articles were published. One in the Friday 1/6/12 paper and one in the 1/8/12 paper
1-8	DAC Flood Commission will coordinate with the incorporated communities to present an overview of the plan update process in a public hearing setting as needed and desired by the communities. All public hearings will be scheduled and conducted prior to the end of March 2012. Copies of the meeting minutes, agendas and announcements will be provided to Tectonic/JEFuller for documentation in the plan.	DAC Flood Commission and Jurisdictions [3/31/12]	NC	NA	NA	NA	NA	NA	NA	NA	• 4/11/12 – No public hearings conducted as of this date. Will be done if needed. Closing out task.
2-1	D. Macial to provide a GIS shapefile of the EBID boundary to O. Fierro for delivery to Tectonic/JEFuller.	D. Macial [2/20/12]	NA	NA	C	NA	NA	NA	NA	NA	• 2/28/12 – shapefiles provided by EBID via email through Orlando
2-2	K. Doolittle or G. Haubold to provide a GIS shapefile of NMSU property boundaries to O. Fierro for delivery to Tectonic/JEFuller.	K. Doolittle / G. Haubold [2/20/12]	NA	NA	NA	NA	NA	NA	C	NA	• 2/20/12 – shapefiles provided by NMSU via Orlando.
2-3	M. Villa to provide EAP related inundation mapping for Elephant Butte and Caballo Dams. GIS shapefile data will be provided if available. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 3/20/12 – DAC provided scanned maps via email from Orlando
2-4	JD Padilla (City of Las Cruces) to provide DFIRM data for use in the city limits if desired. Data will be provided to O. Fierro for delivery to Tectonic/JEFuller.	JD Padilla [2/20/12]	NA	NA	NA	NA	C	NA	NA	NA	• 3/19/12 – Received the flood coverage from JD via email from Orlando.
2-5	M. Villa to coordinate with SWCA to provide the draft CWPP fuel hazard layer data to O. Fierro for delivery to Tectonic/JEFuller.	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 2/6/12 – Received draft files from SWCA via e-mail.

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2-6	K. Doolittle or G. Hauhold will provide NMSU related event description and loss estimates for the Feb 2011 extreme cold event to Tectonic/JE Fuller	K. Doolittle / G. Hauhold [2/20/12]	NA	NA	NA	NA	NA	NA	C	NA	• 2/28/12 – NMSU provided descriptions and loss estimates for Feb 2011 event via email through Orlando.
2-7	M. Villa will provide loss reports compiled by his agency for the Feb 2011 extreme cold event. Data will be provided to O Fierro for delivery to Tectonic/JEFuller	M. Villa [2/20/12]	C	NA	NA	NA	NA	NA	NA	NA	• 2/21/12 – Report now due by M. Villa via email through Orlando
2-8	Tectonic/JeFuller will provide an electronic version of the historic hazard event database to O Fierro for distribution to the Steering Committee for review and augmentation, as appropriate	Tectonic/JEFuller [1/30/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – files delivered to Orlando for distribution via email.
2-9	All jurisdictions are to review the historic hazard event database and provide comments, additions, and/or modifications to Tectonic/JEFuller.	All Jurisdictions [2/27/12]	C	NC	NC	C	C	NC	C	NC	• 2/20/12 – NMSU provided specific records via an email through Orlando. • 2/27/12 – Historic records for Feb 2011 freeze were provided by M. Villa via email through Orlando. • 4/11/12 – Nothing received from Anthony, EBID, Hatch, Mesilla, or Sunland Park. Closing out task. • 5/7/12 – Hatch sent additions via email from Orlando.
2-10	Tectonic/JEFuller will provide an electronic version of the CPRI worksheet to O. Fierro for distribution to and completion by each of the participating jurisdictions	Tectonic/JEFuller [1/30/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – files delivered to Orlando for distribution via email.

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2-11	All jurisdictions shall perform a CFRI evaluation of all the Plan hazards using the CFRI worksheet provided by Tectonic/JEFuller.	all jurisdictions [3/5/12]	C	C	C	C	C	C	C	C	• 2/20/12 – NMSU provided completed worksheet via email through Orlando. • 2/[illegible]/12 – DAC provided completed worksheet via email from M. Vela through Orlando. • 2/[illegible]/12 – Anthony provided completed worksheet via email through Orlando. • 2/28/12 – EBID provided completed worksheet via email through Orlando. • 3/19/12 – Las Cruces provided completed worksheet via email through Orlando. • 4/19/12 – Mesilla and Sunland Park provided completed worksheets at Mtg No. 4 • 5/10/12 – Hatch provided completed worksheet via email through Orlando.
2-12	Tectonic/JEFuller will: 1) Compile an initial CFI database using lists provided by O. Fierro and provide it to DAC for completion(in particular, the identification of lat-long coordinates and replacement costs). 2) Provide a digital CFI worksheet for use by all other participating jurisdictions to use in compiling their CFI data.	Tectonic/JEFuller [2/3/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – CFI template worksheet file delivered to Orlando for distribution via email. • 1/30/12 – CFI initial database provided to Orlando via email.
2-13	All jurisdictions will complete the CFI database and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/20/12]	C	C	C	C	C	C	C	C	• 2/28/12 – NMSU provided CFI database. • 2/29/12 – EBID provided there CFI database. • 3/1/12 – Received an email from Orlando stating he is still working on the database. • 3/20/12 – Las Cruces provided CFI database via email from Orlando.

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2-14	Each jurisdiction shall provide a brief description of development trends for the last 5 year period and the anticipated development areas for the next 5 year period. Descriptions shall be provided to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [2/27/12]	C	C	C	C	C	C	C	C	• 2/20/12 – NMSU provided development trends [illegible] email through Orlando. • [illegible] – DAC provided [illegible] and development trends [illegible] from Orlando. • [illegible] – DAC provided [illegible] Orlando. • [illegible] – Las Cruces provided [illegible] development trend analysis via email from Orlando. • 4/17/12 – Anthony, Mesilla, and Sunland Park provided descriptions at Mtg No. 4 • 5/3/12 – EBID provided completed information via email through Orlando. • 5/16/12 – Hatch provided completed information via email through Orlando.
2-15	Tectonic/JEFuller will deliver jurisdiction specific worksheets for assessing the 2004 Plan mitigation A/Ps to O. Fierro for distribution to the jurisdictions.	Tectonic/JEFuller [1/30/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 1/27/12 – files delivered to Orlando for distribution via email.
2-16	All jurisdictions except the City of Anthony, EBID, and NMSU will complete the 2004 Plan mitigation A/P assessment worksheets and provide to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions (except as noted) [3/5/12]	C	NA	NA	C	C	C	NA	C	• 2/23/12 – DAC OEM provided their part of the worksheet. • 2/27/12 – DAC Flood Commission provided the rest of the worksheet. • 3/19/12 – Las Cruces provided the completed worksheet via an email from Orlando. • 4/19/12 – Mesilla and Sunland Park provided completed worksheets at Mtg No. 4 • 5/10/12 – Hatch provided completed worksheet via email through Orlando.

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ITEM NO.	DESCRIPTION	RESPONSIBILITY [DUE DATE]	DOÑA ANA COUNTY	ANTHONY	ELEPHANT BUTTE ID	HATCH	LAS CRUCES	MESILLA	NEW MEXICO ST. UNIV.	SUNLAND PARK	EXPLANATION
3-1	Tectonic/JEFuller will provide the NFIP continue compliance worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.
3-2	All jurisdictions except the City of Anthony, ERID and NMSU must complete the NFIP continue sheet and return to O. Fierro for delivery to Tectonic/JEFuller	DAC, Hatch, Las Cruces, Mesilla, and Sunland Park [4/13/12]	C	NA	NA	C	C	C	NA	C	• 5/23/12 – DAC provided worksheet via an email from Orlando • 4/4/12 – Hatch provided worksheet via an email from Orlando • 4/[illegible]/12 – Las Cruces provided worksheet via an email from Orlando. • 4/[illegible]/12 – Mesilla and Sunland Park provided worksheet at MAC on 4
3-3	Tectonic/JEFuller will provide the capability assessment worksheet to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.
3-4	All jurisdictions shall complete the capability assessment worksheet and provide the completed worksheet to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]	C	C	C	C	C	C	C	C	• 5/1/12 – ERID provided completed worksheet via an email from Orlando • 4/10/12 – DAC provided completed worksheet via an email from Orlando • 4/16/12 – NMSU provided completed worksheet via an email from Orlando. • 4/10/12 – Anthony, Mesilla, and Sunland Park provided completed worksheets at Mtg No. 4 • 4/27/12 – Las Cruces provided completed worksheet via an email from Orlando. • 5/14/12 – ElID provided completed worksheet via an email from Orlando.
3-5	Tectonic/JEFuller will provide drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan to O. Fierro for distribution to the Steering Committee	Tectonic/JEFuller [3/16/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 3/16/12 – Provided to Orlando for distribution to the Steering Committee.

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3-6	All Jurisdictions shall review the drafts of the Plan Integration and Plan Maintenance Procedures sections of the 2012 Plan, and provide all comments to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [4/13/12]	NC	NC	NC	NC	NC	NC	C	NC	• 4/16/12 – Received comments from NMSU via an email from Orlando. • 4/19/12 – Verified no further comments at Mtg No. 4
4-1	M. Villa to provide NMSU Chihuahuan Desert Rangeland Research Center boundaries in GIS format to O. Fierro for distribution to Tectonic/JEFuller.	M. Villa [4/27/12]	C	NA	NA	NA	NA	NA	NA	NA	• 4/27/12 – JEF was able to find the GIS shapefile online.
4-2	D. Macial of EBID will check into unit replacement cost estimates for EBID facilities and provide to O. Fierro for delivery to Tectonic/JEFuller.	D. Macial [4/27/12]	NA	NA	C	NA	NA	NA	NA	NA	• 5/14/12 – EBID responded with a note that the costs used and presented at Mtg No. 4 were valid for this plan.
4-3	Tectonic/JEFuller will provide the mitigation action/project worksheet to O. Fierro for distribution to the Steering Committee.	Tectonic/JEFuller [4/26/12]	NA	NA	NA	NA	NA	NA	NA	NA	• 5/2/12 – Provided worksheets to Orlando for distribution to the individual jurisdictions.
4-4	All jurisdictions shall complete the mitigation action/project worksheet and provide the completed worksheet to O. Fierro for delivery to Tectonic/JEFuller.	All Jurisdictions [5/11/12]	C	C	C	C	C	C	C	C	• 4/27/12 – Anthony and Sunland Park provided completed worksheets at Mtg No. 4. • 5/11/12 – DAC provided completed worksheet. • 5/11/12 – Hatch and Mesilla provided completed worksheets via an email from Orlando. • 5/14/12 – Las Cruces provided completed worksheet via email from Orlando. • 5/15/12 – EBID and NMSU provided completed worksheet via email from Orlando.

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Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
DONA ANA COUNTY			
Dennis Smith	Dona Ana County Community Development, GIS Section	Mapper/GIS Specialist	Critical Facilities Information and miscellaneous demographics
John Gwynne	Dona Ana County Flood Commission, Administrative	Engineer Supervisor	Steering Committee Member, direction and support
Paul T. Dugie	Dona Ana County Flood Commission, Administrative	Director	Steering Committee Member, direction and support
Daniel Hortert	Dona Ana County Community Development	Senior Planner	Steering Committee Member, demographics and support
Michael Villa	City of Las Cruces/Dona Ana County OEM	Emergency Management Coordinator	Steering Committee Member, direction, and support
David Almaguer	City of Las Cruces/Dona Ana County OEM	Emergency Management Supervisor	Steering Committee Member, direction, and support
Judd L. Nordyke	Village of Hatch, Administration	Mayor	Steering Committee Member, demographics and support
Jim Schoonover	Village of Hatch, Administration	Clerk/Administrator	Steering Committee Member, demographics and support
Dwaine Solana	City of Sunland Park, Building Inspections	Building Inspector	Steering Committee Member, demographics and support
J.D. Padilla	City of Las Cruces Public Works	Floodplain Administrator	Steering Committee Member, demographics and support
Nick Eckert	Town of Mesilla, Administration	Town Clerk/Treasurer	Demographics and support
Mike Castillo	Village of Hatch, Public Works Department	Supervisor	Steering Committee Member, demographics and support
Delia Cervantes	City of Las Cruces/Dona Ana County OEM	OEM Specialist	Support and outreach at LEPC
Lorenzo Espinoza	NM Dept of Homeland Security and Emergency Management, Preparedness Bureau	Local Preparedness Coordinator for Area 6	Steering Committee Member, direction, and support
Nora Barraza	Town of Mesilla, Administration	Mayor	Demographics, direction, and support
Delyce Maciel	EBID, HR/Safety	HR/Safety Director	Steering Committee Member, demographics, direction, and support
Gary Esslinger	EBID, Administration	Director	Direction and support
Pat Lopez	EBID, Hydrology-Water Quality	Supervisor	Steering Committee Member, demographics, and support
Glen Haubold	NMSU, Facilities and Services	Assistant Vice President Facilities and Services	Steering Committee Member, demographics, and support
Katrina Doolittle	NMSU, Environmental Health and Safety, Facilities and Services	Director	Steering Committee Member, demographics, direction, and support
Debbie Lujan	Town of Mesilla, Public Works Department	Director	Steering Committee Member, demographics, and support
Kevin Hoban	Town of Mesilla, Fire Department	Fire Department Supervisor	Steering Committee Member, demographics, and support
Linda Vazquez	City of Sunland Park, Community Development	Department Director	Support
Roger Hedrick	Dona Ana County Community Development	Deputy Director	Direction and support
Wendy Blackwell	NM Dept of Homeland Security and Emergency Management, Preparedness Bureau	State Hazard Mitigation Officer	Direction and support
Chris Brown	NMSU, Department of Geography and Spatial Apps Research Center	Dept Head and Director	Demographics and support

Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
Raymond Carr	NMSU, Department of Geography	GIS Analyst	Demographics and support
Diana Murillo	City of Anthony, NM, Administration	City Trustee	Steering Committee Member, demographics, and support
Betty Gonzalez	City of Anthony, NM, Administration	City Trustee	Steering Committee Member, demographics, and support
Todd Gregory	Las Cruces Public Schools, Safety and Security	Coordinator	Direction and support
Jeff Harris	Las Cruces Public Schools, Tech Support Services	Director	Direction and support
Bill Borthwick	NM Dept of Homeland Security and Emergency Management, Preparedness Bureau	State Floodplain Coordinator	Demographics, direction and support
Andrew Bencomo	City of Las Cruces Fire Department	Fire Department	Direction and support
Steve Mims	City of Las Cruces Fire Department	Fire Department	Direction and support
Mary Lover	FEMA, Department of Homeland Security Region 6	Hazard Mitigation Planner	Direction and support
Brian D. Haines	Dona Ana County, Administration	CEO/County Manager	Direction and support
Sue Padilla	Dona Ana County, Administration	Assistant County Manager, Utilities Director	Direction and support
Gloria Y. Irigoyen	City of Anthony, NM, Administration	City Clerk	Direction and support
Rebecca Garcia	Dona Ana County, Main Front Desk Operations	Switchboard Operator	Reserving Meeting Rooms and directing attendees to our meeting
Arthur Sanchez	El Paso Electric Company, ROW Section	Specialist	Informed about meetings
Edward Seeley	El Paso Electric Company, Dist Design and Delivery Business Unit	Supervisor	Informed about meetings
Josie Sanchez	Dona Ana County Flood Commission, Administrative	Secretary	Assisted with copies, information, and miscellaneous
Robert Avalos	Dona Ana County Flood Commission, Survey Party Chief	Supervisor	Demographics, direction and support
Ruben Reyes	Dona Ana County Assessors Department	GIS/Mapping Supervisor	Demographics, direction, and support
Tambri Hunteman	Dona Ana County Flood Commission, Mapping	GIS/Mapping Specialist	Demographics, direction, and support
Alexis Zarret	State of NM Commission for Deaf and Hard of Hearing Persons	Administrative Specialist	Demographics and support
Miguel Parra	The Ability Center for Independent Living	Social Security Payee Advocate	Demographics and support
Lloyd Burns	Village of Hatch, Administration	Trustee	Demographics, direction, and support
Donald E. Bullard	Dona Ana County Purchasing Department	Purchasing Manager	Direction and support
Connie C. Welles	Dona Ana County Purchasing Department	Contract Coordinator	Direction and support
Jess Williams	Dona Ana County Public Information Department	Director	Outreach and support
Kelly Jameson	Dona Ana County Public Information Department	Communications Specialist	Outreach and support
Information Technology (IT) Staff	Dona Ana County Information Technology Department	Various IT Staff Members	AV Support

Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
Paula Flores	NM Dept of Homeland Security and Emergency Management, Administrative Services Division	Grant Unit Manager	Direction and support
Shari Harris	Las Cruces Sun-News Paper	Advertising Manager	Outreach and support
Sophia A. Beym	NM Dept of Homeland Security and Emergency Management, Preparedness Bureau	State Hazard Mitigation Officer	Direction and support
Susan Walker	NM Dept of Homeland Security and Emergency Management, Preparedness Bureau	Bureau Chief	Direction and support
Evonne Gantz	NM Dept of Homeland Security and Emergency Management, Recovery and Response Bureau	Operations Unit Manager	Direction and support
Cathy Jimenez	Dona Ana County Community Development, Building Services Division	Chief Building Official	Demographics, direction, and support
Chuck McMahon	Dona Ana County Community Development	Director	Direction and support
Rene Molina	Dona Ana County Engineering Department	Engineer Intern	Direction and support

Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
		CITY OF ANTHONY	
Betty Gonzalez	City Council	City Trustee	Steering Committee member. Involved in all aspects hazard mitigation plan development
Diana Murillo	City Council	City Trustee	Steering Committee member. Involved in all aspects hazard mitigation plan development
		ELEPHANT BUTTE IRRIGATION DISTRICT	
Delyce Maciel	EBID	HR/Safety Director	Steering Committee member, CPOC, involved in all aspects
Gary Esslinger	EBID	Manager	History and Direction for future
Valerie Beversdorf	EBID	CRGS Director	Maps
Leslie Kryder	EBID	CRGS Functional Resource Mgr	Maps and GIS information
Zach Libbin	EBID	Jr Engineer	Flood Control Dam Information
		VILLAGE OF HATCH	
Judd Nordyke	Village of Hatch, City Hall	Mayor	Direction, demographic information and historical data
Jim Schoonover	Village of Hatch, City Hall	City Clerk	Direction and demographic information
Mike Castillo	Village of Hatch, City Hall	Public Works Director	demographic information and historical data
Andrew Guerra	Bohannan Huston, Inc.	Contract Village Engineer	Assisted with completing worksheets and provided technical input.
		CITY OF LAS CRUCES	
J.D. Padilla	City of Las Cruces - Public Works Department / Engnieering Services	Floodplain Administrator	AHMP Steering Committee Member
D. Erik Martin, CFM, FMP	City of Las Cruces - Public Works Department / Facilities Management	Facilities Management Administrator	Estimated replacement cost for LC-Structures
Fernie Ortiz	City of Las Cruces - Utilities	Senior Engineering Technician	Estimated replacement cost for LC-Wells
John Reid, P.E.	City of Las Cruces - Utilities	Regulatory Environmental Services & Technical Support	Estimated replacement cost for LC-Wells
Dick Gebhart	City of Las Cruces - Finance / Budget	Budget Manager	Legal and regulatory capabilities
		TOWN OF MESILLA	
Debbie Lujan	Public Works	Director	Review of plans, research to identify infrastruture, participating in planning meetings
Orlando Fierro	Dona Ana County Flood Commission	Planner	Help with research, historical background information, formulation of responses
Nora Barraza	Town of Mesilla	Mayor	Review of project status
Jeff Gray	Marshal's Department	Marshal	Participated in initial planning meetings, provided planning feedback
Michael Villa	DAC/CLC Office of Emergency Management		Provided feedback and background information, co-participant in CWPP review committee

Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
NEW MEXICO STATE UNIVERSITY			
Ben Woods	Senior VP for External Relations	Sr VP Ext Rel/Chief Staff	NMSU Emergency & Mitigation Planning Committee
Glen Haubold	Facilities and Services	Asst VP for Facilities	NMSU Emergency & Mitigation Planning Committee Liaison to DAC HMP steering committee
Mrinal Virnave	ICT Enterprise Application Svcs	Dir,Enterprise IT	NMSU Emergency & Mitigation Planning Committee
Tammy Anthony	Auxiliary Administration	Asst VP,Auxiliary Svcs	NMSU Emergency & Mitigation Planning Committee
Minerva Baumann	News and Media Relations	Dir, News & Media Relations	NMSU Emergency & Mitigation Planning Committee
Shaun Cooper	Planning and Info Tech VP Office	Assc VP,Info Tech	NMSU Emergency & Mitigation Planning Committee
Tim Dobson	Facilities and Services	Exec Dir, Fac and Serv	NMSU Emergency & Mitigation Planning Committee
Katrina Doolittle	FS Environmental Health Safety Off	Dir, Environ Health & Safety	NMSU Emergency & Mitigation Planning Committee Liaison to DAC HMP steering committee
Norma Grijalva	ICT Telecomm and Networking Svcs	Deputy CIO/Telecomm Dir	NMSU Emergency & Mitigation Planning Committee
Stephen Lopez	Police Department NMSU	Deputy Chief	NMSU Emergency & Mitigation Planning Committee
Celso Enciso	FS Fire Protection Services	Fire Protection Shift Captain	NMSU Emergency & Mitigation Planning Committee
Susan Waldo	Campus Activities	Assc Dean of Students	NMSU Emergency & Mitigation Planning Committee
Lisa Warren	General Counsel Office	Assc General Counsel	NMSU Emergency & Mitigation Planning Committee
Anthony Parra	New Mexico Dept of Agriculture	Deputy Dir/Secretary of NMDA	Mitigation Planning / Biosecurity Food Safety
Chris Brown	Geography Department	Acad Dept Head	GIS, Planning & Development
Raymond Carr	Geography Department	GIS Analyst	GIS, Mapping
Jack Kirby	Facilities and Services	Exec Dir, Proj Dev & Eng	Planning & Development
David Shearer	FS Environmental Health Safety Off	Asst Dir, Envir Health/Safety	Environmental Health & Safety
David Church	FS Engineering	Facs Engr	Engineering
Greg Walke	Facilities and Services	University Architect	Architecture, Planning & Development

Local Planning Team Members and Resources

Name	Department/Division/Branch	Title	Contributions
CITY OF SUNLAND PARK			
Dwaine Solana	Community Development	Building Inspector / CFM	Steering Committee member and lead for local planning team. Involved in all aspects of the Plan development
Linda Vazquez	Community Development	Director	Provided managerial support for planning effort.
LAS CRUCES PUBLIC SCHOOLS			
Director Jeff Harris	Dept. of Technical Support	Director	Resource for LCPS information and emergency response details.
Coordinator Todd Gregory	Safety & Security	Coordinator	Resource for LCPS information and emergency response details.
Director Larry Altamirano	Dept. of Transportation	Director	Has access to hundreds of school Buses.

Appendix D

Public Involvement Documentation

IN BRIEF

Animal protection hosts fundraiser

LAS CRUCES — Animal Protection Voters will host a fundraising event from 5:30 to 7:30 p.m. Jan. 12 at the Cafe BellaLuca Italian Restaurant in Truth or Consequences.

U.S. Rep. Martin Heinrich, D-NM, will join through streaming video. Heinrich is running for the U.S. Senate seat that will be vacated by Jeff Bingaman.

The event is free, but donations will be accepted. Refreshments will be served.

For more information, call Daniel Abram at (505) 265-2322, extension 32.

Cat shot in eye needs foster home

LAS CRUCES — Bailey, a male cat, had an unlucky shot when he took a BB to his eye.

The good news is that Bailey has been taken into foster care for future adoption — possibly at PetSmart. The bad news is, Bailey needs a permanent home where he can recover from his wounds.

Bailey

Bailey is a very sweet cat, a little shy at first, who was shot three times with a BB gun, once in the neck and twice in the face, in La Mesa. He got lucky in that his eye was not damaged, and once it

Public input sought for mitigation plans

LAS CRUCES — Doña Ana County residents are invited to share ideas and provide input to a multi-jurisdictional steering committee charged with renewing the county's All-Hazard Mitigation Plan. The plan has been in effect since 2003, and proactively prepares for emergency preparedness in the event of a man-made or natural disaster.

Federal guidelines require the public be allowed to give input on the plan, which is revised every five years.

The committee, which meets monthly, includes representatives from the county, the cities of Las Cruces, Anthony, and Sunland Park, the town of Mesilla, the village of Hatch, Elephant Butte Irrigation District and New Mexico State University. Meetings are conducted to review, revise, and update several elements of the All-Hazard Mitigation Plan.

The committee's meeting will be from 8:30 a.m. to 12:30 p.m. Jan. 24 at the Doña Ana County Government Center, 845 N. Motel Boulevard. Anyone unable to attend can contact the Flood Commission Office at (575) 525-5558 or via email to Orlando Fierro of the Doña Ana County Flood Commission, orlandof@donaanacounty.org.

Pan American Center updates announced

more information, visit the official LWD site at http://dance.nmsu.edu/look-whosdancing/.

Fewer than 100 single-seat tickets remain for the Brad Paisley, The Band Perry & Scotty McCreery concert Feb. 17. For more information and tickets, visit panam.nmsu.edu/event2.htm.

The newly updated WWE RAW World Tour card for Jan. 22 at the Pan American Center includes a championship match between CM Punk and Alberto Del Rio, John Cena vs. Kane and a special appearance by Chris Jericho. Additional WWE superstars currently scheduled to appear are The Miz, Zack Ryder, Dolph Ziggler, Mason Ryan and more.

Spaceport forum sponsored Tuesday

LAS CRUCES — Spaceport America, Virgin Galactic and key site operations contractors will provide a briefing on upcoming activities as the Commercial Space Committee of the Greater Las Cruces Chamber of Commerce sponsors the first Spaceport Community Forum of the year from 5:30 to 7 p.m. Tuesday at the Doña Ana County Government Center, 845 N. Motel Blvd. Representatives from Fiore Industries, Enterprise Advisory Services Inc. and Follow The Sun Tours will share their roles at Spaceport and Virgin Galactic representatives. Information will also be presented on other local and statewide procurement registration databases to assist local businesses in identifying opportunities in 2012. A "business card" drawing will be held for four tours passes to Spaceport America. The Department of Aerospace Engineering is involved with this event.

For more information, call the Greater Las Cruces Chamber of Commerce at (575) 524-1968.

Road work on Mesquite Street

LAS CRUCES — Las Cruces motorists are advised there will be road work beginning Monday on Mesquite Street from East Lohman Avenue to Kansas Avenue. Crews will be striping the road. The section of Mesquite Street will be closed from 10 a.m. to 2 p.m. Residents and motorists should find alternative routes during this time period. For more information, call the city of Las Cruces Transportation Department at (575) 541-2595.

City offering new Zumba classes

LAS CRUCES — Due to the high demand for Zumba® classes, the city has added classes and new times.

Beginning Jan. 23, a new Zumba Gold class will be from 5:30 to 6:30 p.m. on Mondays

5589 Porter Drive.

Days and times for all Zumba classes include:

- Meerscheidt Recreation Center, 1600 E. Hadley Avenue: Monday through Thursday, 5:45 to 6:45 p.m.
- Benavidez Community Center, 1045 McClure Road: Monday and Wednesday, 6 to 7 p.m.
- East Mesa Recreation Center, 5589 Porter Drive: Tuesday and Thursday, 6 to 7 p.m.
- Munson Senior Center, 975 S. Mesquite Street: Monday and Wednesday, Zumba Gold, 5:30 to 6:30 p.m.
- Regional Aquatic Center, 1401 E. Hadley Avenue: Tuesday through Thursday Aqua Zumba, 2 to 3 p.m. and 5:30 to 6:15 p.m. Classes on Saturdays will be from 9:30 to 10:30 a.m.

The cost for classes is $2 per person.

For additional information, call the Parks and Recreation Department at (575) 541-2550. People who are hearing-impaired can call (575) 541-2182.

Garrison flag to fly for centennial

LAS CRUCES — The Garrison flag will be flown Saturday at Veterans Memorial Park, 2651 Roadrunner Parkway, in observance of the New Mexico Centennial. The date was recently added by the Mayor's Veterans Advisory Board to commemorate the Centennial and to promote the Centennial Parade.

Radioactive waste

NM, lab reach deal on cleanup

By Jeri Clausing
ASSOCIATED PRESS

POJOAQUE, N.M. — Bowing to pressure from the state, Los Alamos National Laboratory officials said Thursday they would speed up removal of the thousands of drums of radioactive waste that have been sitting on lab property for decades.

But they won't be able to meet some other deadlines in an agreement that calls for the bulk of the lab's legacy waste and contaminated sites to be remediated by 2015.

"It is not possible to meet the 2015 consent order," David Real, the assistant manager for environmental programs at the lab's site office, told the Northern New Mexico Citizen's Advisory board during a special meeting. He said he hoped the New Mexico Environment Department would be open to renegotiating some aspects of that cleanup order.

Real blamed congressional budget cuts, technical challenges and the shift in priorities for its lagging progress on clean up.

NMED officials said they would not commit to renegotiating any cleanup deadlines un-

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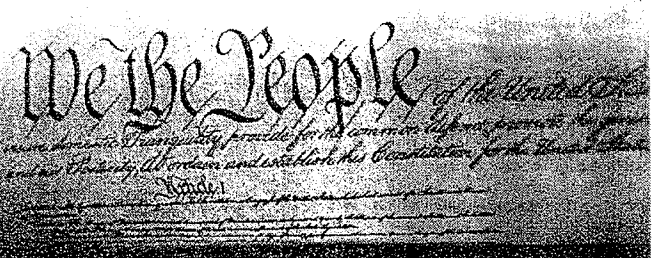
VHINING

LAS CRUCES SUN-NEWS

DEFENDING FREEDOM DAILY SINCE 1776



Since the founding of our nation, the role of newspapers in our democracy has been crystal clear. We have been, and will continue to be, the eyes and ears of the American people. After all, the right of free speech is meaningless if no one knows what's really going on. That's why more than 100 million Americans depend on their hometown newspapers daily and why today's newsrooms are staffed with dedicated, highly trained reporters and experienced editors who bring you the very best journalism found anywhere, in print and online.

People Depend On Newspapers

LAS CRUCES SUN-NEWS

Legal Notices 152

NOTICE OF INTENT TO ADOPT

Notice is hereby given that the Las Cruces City Council will hold a Public Hearing to discuss approval or disapproval of the Transfer of Ownership of State Liquor License #2752 to Sunilaben Patel d/b/a Best Western Mission Inn, located at 1765 South Main Street, Las Cruces, New Mexico.

The Public Hearing will be held in conjunction with the reg-

provision of services. The City of Las Cruces will make reasonable accommodation for a qualified individual who wishes to attend this meeting. Please notify the City Community Development Department at least 48 hours before the meeting by calling 528-3043 (voice) or 1-800-659-8331 (TTY) if accommodation is necessary. This document can be made available in alternative formats by calling the same numbers listed above.

NMAC, this permitting action involves incorporating changes authorized by NSR 2466M3 for SSM limits, CO 664.0 lb/hr and NOx 94.3 lb/hr.

The emissions, as established in NSR Permit 2466M3, and brought forward into this permit are as follows. Parentheses note changes in emissions from previous operating permit action P211-R1; emissions are expressed in tons per year (tpy). Nitrogen Oxides (NOx) of 232.1

partment contact in Santa Fe is Joseph Kimbrell at 505-476-4347.

Publication # 50048
Publication Date: Jan 8, 2012.

Public Input Invited

All-Hazard Mitigation Plan Update Begins

Hazard mitigation planning is the process used to identify risks and vulnerabilities associated with natural disasters and to de-

Flood Commission Office, 845 N Motel Blvd, Room 1-250 Las Cruces, New Mexico
orlandof@donaanacounty.org

Publication #: 50015
Publication Date: January 8, 2012

REQUEST FOR PROPOSALS NOTICE:

A notice is hereby given that Dona Ana County (DAC) will receive Sealed Proposal(s) of the Office of the Dona

s/
Donald E Bullard
Dona Ana County
Purchasing Manager
(575) 525-5927

Publication # 50049
Publication Date: Jan 8, 2012.

REQUEST FOR PROPOSAL

Sealed Proposals in triplicate will be received until 11:00 a.m., on 20 January 2012, at the Office of the Chief Financial Officer, New Mexico Military Institute, Roswell, New Mexico

na Ana County, this 6th day of December, 2011.
James H Dempsey
CLERK OF THE DISTRICT COURT
BY: Rosie Stewart, DEPUTY

Publication # 50042
Publication Dates: Jan 8, 15, 22, 29, 2012.

STATE OF NEW MEXICO
COUNTY OF DONA ANA
THIRD JUDICIAL DISTRICT COURT

IN THE MATTER OF A PETITION OF

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LAS CRUCES SUN-NEWS

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on #: 46565
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1, 8, 2012

NOTICE OF INTENT TO ADOPT

Notice is hereby given that the Las Cruces City Council will hold a Public Hearing to discuss approval or disapproval of the Transfer of Ownership of State Liquor License #2752 to Sunilaben Patel d/b/a Best Western Mission Inn, located at 1765 South Main Street, Las Cruces, New Mexico.

The Public Hearing will be held in conjunction with the regular meeting of the Las Cruces City Council to be held on Tuesday, January 17, 2012, at 1:00 p.m. in the City Council Chambers, 700 North Main Street, City Hall. If passed, the State of New Mexico Regulation & Licensing Department may approve the issuance.

Witness my hand and seal of the City of Las Cruces on this the 12th day of December 2011.

/s/ Esther Martinez, CMC, City Clerk

Publication #: 46564
Publication Date: December 1, 8, 2011

PLANNING AND ZONING COMMISSION
NOTICE OF PUBLIC HEARING

Notice is hereby given to the general public that applications involving the properties and/or issues described below have been submitted and are available for review at the Community Development Department Offices at 700 N. Main Street, Suite 1100. All properties are located within the corporate limits of the City of Las Cruces.

The Planning and Zoning Commission will hold a public hearing on these items in accordance with the Zoning Code and Subdivision Code on Tuesday, January 24, 2012 beginning at 6:00 p.m. in City Council Chambers of City Hall, 700 N. Main Street, Las Cruces, New Mexico. Cases acted on at this meeting may be tentatively scheduled for City Council action at the March 5, 2011 regular City Council Meeting. Please contact Community Development Staff to ascertain the exact City Council meeting date.

Persons unable to attend the scheduled Planning and Zoning Commission public hearing may deliver written comments regarding these cases to the Community Development Department or mail them to P.O. Box 20000, Las Cruces, New Mexico, 88004. Written comments may also be presented at the public hearing.

The City of Las Cruces does not discriminate on the basis of race, religion, sex, sexual orientation, gender identity, color, ancestry, serious medical condition, national origin, age, or disability in the provision of services. The City of Las Cruces will make reasonable accommodation for a qualified individual who wishes to attend this meeting. Please notify the City Community Development Department at least 48 hours before the meeting by calling 528-3043 (voice) or 1-800-659-8331 (TTY) if accommodation is necessary. This document can be made available in alternative formats by calling the same numbers listed above.

I. NEW BUSINESS

1. Adoption of Statement of Reasonable Notice as required by Section 10-15-1(B) of the Open Meetings Act, Section 10-15-1 to 10-15-4, New Mexico Statutes Annotated (1978), as amended.

2. Election of Officers.

3. Case S-11-037: Application of Sonoma Ranch North, LLC for a preliminary plat known as Sonoma Ranch North Phase 1 on a 5.74 ± acre tract located on the south side of Northrise Drive at its intersection with Purple Sage Drive within the Sonoma Ranch North master planned area; Parcel ID# 02-36081. Proposed Use: Single-family residential lots. Council District 6.

Publication # 50052
Publication Date: Jan 8, 2012.

PUBLIC NOTICE
For
Air Quality Operating Permit
for Afton Generating Station of Public Service Company of New Mexico (PNM)

Public Service Company of New Mexico (PNM) at Alvarado Square MS 2104, Albuquerque, NM 87158 has submitted an air quality operating permit application to the New Mexico Environment Department (NMED) for an air quality operating permit for its Afton Generating Station. The owner of this plant is Public Service Company of New Mexico (PNM). The exact location of the facility is at latitude 32 deg, 6 min, 45 sec and longitude -106 deg, 50 min, 58. The facility is approximately 12 miles south of La Mesa in Dona Ana County. This application file has been assigned an Operating Permit Number P211-R1M2 and TEMPO Agency Interest ID No. 164.

Previously, the plant received an air quality construction permit, if one was required, and is in operation or able to operate. The main purpose of the plant is an electric generating facility consisting of one GE Frame 7FA combustion turbine with combined cycle heat recovery steam generator (HRSG) capability.

This operating permit application is for a permit minor modification. Per 20.2.70.401.C.(4) NMAC, this permitting action involves incorporating changes authorized by NSR 2466M3 for SSM limits. CO 664.0 lb/hr and NOx 94.3 lb/hr.

The emissions, as established in NSR Permit 2466M3, and brought forward into this permit are as follows. Parentheses note changes in emissions from previous operating permit action - P211-R1; emissions are expressed in tons per year (tpy). Nitrogen Oxides (NOx) at 232.1 tpy (no change); Carbon Monoxide (CO) at 165.0 tpy (no change); Volatile Organic Compounds (VOC) at 76.8 tpy (no change); Sulfur Dioxide (SO2) at 13.0 tpy (no change); Particulate Matter: TSP 49.1 tons/yr (no change), and Particulate Matter 10 microns or less (PM10 and PM2.5) at 48.2 tpy (no change). The facility is a major, >100,000 tpy CO2e, source of green house gas emissions.

The NMED has conducted a preliminary review of the information submitted with the permit application. This review included evaluation of the emission rates and applicable requirements to determine compliance status.

The NMED has made a preliminary determination that this plant will comply with the requirements of New Mexico Administrative Code 20.2.70, 20.2.71, 40CFR60, Subpart GG, 40CFR72, Subpart A - Acid Rain Program, and the New Mexico Air Quality Control Act. Therefore, the preliminary intent of NMED is to issue the air quality operating permit on or before April 02, 2012.

Interested persons may obtain the draft operating permit, submit written comments, or request a public hearing on Operating Permit Number P211-R1M2. Contact the New Mexico Environment Department, Air Quality Bureau, Operating Permit Unit, 1301 Siler Rd, Bldg B, Santa Fe, New Mexico 87507-3113.

Written requests for public hearing must state the nature of the issues proposed to be raised in the hearing. Comments must be based on the requirements of the applicable state and federal air quality regulations and the Clean Air Act. Comments or hearing requests must be received within 30 days after the public notice is published.

The permit application, draft permit and relevant supporting materials are currently available for review at the Air Quality Bureau, Operating Permits Unit, 1301 Siler, Bldg B, Santa Fe, New Mexico 87507-3113. The Department contact in Santa Fe is Joseph Kimbrell at 505-476-4347.

Publication # 50048
Publication Date: Jan 8, 2012.

Public Input Invited

All-Hazard Mitigation Plan Update Begins

Hazard mitigation planning is the process used to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property in future hazard events. The process results in a mitigation plan that offers a strategy for breaking the cycle of disaster damage, reconstruction, and repeated damage and a framework for developing feasible and cost-effective mitigation projects. Under the Disaster Mitigation Act of 2000 (Public Law 106-390), local governments are required to develop and maintain a FEMA approved hazard mitigation plan as a condition of eligibility for receiving non-emergency federal hazard mitigation gran's.

A multi-jurisdictional steering committee comprised of representatives from Dona Ana County, the Cities of Anthony, Las Cruces, and Sunland Park, the Town of Mesilla, the Village of Hatch, the Elephant Butte Irrigation District, and New Mexico State University, will be meeting regularly to review, revise and update the current All-Hazard Mitigation Plan. The steering committee will be meeting regularly to review, revise, and/or update the following plan elements:

Natural hazards that may impact or have impacted the community

Profiles of the most relevant hazards

Vulnerability assessment to the identified hazards

Goals and objectives for hazard risk reduction/elimination

Mitigation actions/projects to achieve the stated goals and objectives

Plan maintenance strategy for the next 5-year cycle

An updated draft of the plan is expected in July 2012. For additional information, please visit: http://donaanacounty.org/flood/mitigation/ or contact your community's representative as listed below:

Tectonic Engineering and Surveying Consultants, PC.
Edward F. Martello, PE
EFmartello@tectonicengineering.com

or

Orlando V. Fierro, CFM Planner-In-Charge,
Dona Ana County Flood Commission Office, 845 N. Motel Blvd, Room 1-250
Los Cruces, New Mexico
orlandof@donaanacounty.org

Publication #: 50015
Publication Date: January 8, 2012

REQUEST FOR PROPOSALS NOTICE:

A notice is hereby given that Dona Ana County (DAC) will receive Sealed Proposal(s) at the Office of the Dona Ana County Purchasing Department, Room 2-147, 845 N. Motel Blvd, Las Cruces, NM 88007, prior to the appointed hour listed below, at which time the proposals will be opened and recorded as received. Specifications for said request for proposal are available at 845 N Motel Blvd, Las Cruces, NM Room 2-147. Any proposal received after the closing time will be returned unopened.

DAC 12-0022 Request for Proposals for Architect/Engineering Services for a New Customs Building at the DAC Airport will be accepted until February 8, 2012 @ 2:00 PM (local time).

Request for Proposals/Bids are available at:
http://www.donaanacounty.org/finance/bid
s/
Donald E Bullard
Dona Ana County
Purchasing Manager
(575) 525-5927

Publication # 50050
Publication Date: Jan 8, 2012.

REQUEST FOR PROPOSALS NOTICE:

A notice is hereby given that Dona Ana County (DAC) will receive Sealed Proposal(s) at the Office of the Dona Ana County Purchasing Department, Room 2-147, 845 N. Motel Blvd, Las Cruces, NM 88007, prior to the appointed hour listed below, at which time the proposals will be opened and recorded as received. Specifications for said request for proposal are available at 845 N Motel Blvd, Las Cruces, NM Room 2-147. Any proposal received after the closing time will be returned unopened.

Project Description: Digital Copier Services on a Cost-Per-Printed Copy basis.

DAC 12-0018 Request for Proposals for a Cost Per Printed Copy Fleet Program for DAC Finance Department will be accepted until February 3, 2012 @ 2:00 PM (local time).

A Pre-Proposal Meeting will be held at Dona Ana County Government Building on January 18, 2012 at 2:00pm.

Request for Proposals/Bids are available at:
http://www.donaanacounty.org/finance/bid
s/
Donald E Bullard
Dona Ana County
Purchasing Manager
(575) 525-5927

Publication # 50049
Publication Date: Jan 8, 2012.

REQUEST FOR PROPOSAL

Sealed Proposals in triplicate will be received until 11:00 a.m., on 20 January 2012, at the Office of the Chief Financial Officer, New Mexico Military Institute, Roswell, New Mexico for the following:

Social Media and Website Strategies Services

Invitation to Proposal may be secured free of charge at the NMMI, Office of the Chief Financial Officer, 101 West College Blvd., Roswell, NM 88201 and are available on the NMMI website at www.nmmi.edu. The Board of Regents reserves the right to reject any and all proposals and to waive all technicalities or informalities in the proposal.

Board of Regents
New Mexico Military Institute

By: /s/ John Henderson
ATTEST: /s/
Secretary/Treasurer
J. William Himes

Publication #: 50023
Publication Date: January 8, 2012

STATE OF NEW MEXICO
COUNTY OF DONA ANA
THIRD JUDICIAL DISTRICT COURT

Christopher A. Orosco Petitioner,
Vs.
Caquita S. Gilbert Respondent.

No. 2011-1637
Judge Jacinto Palomino

NOTICE OF SUIT

TO THE ABOVE-NAMED RESPONDENT:
You are hereby notified that a suit has been filed against you in the said Court and County by the above-named Petitioner, requesting a Divorce/Dissolution of Marriage on the grounds of incompatibility, and a division of property, debts, and a determination of child custody, visitation, and child support.
You must file a Response or responsive pleading within 30 days of the date of the last publication of this Notice or judgment by default will be entered against you and the relief requested in the Petition will be granted.
Christopher A. Orosco (Petitioner's Name)
A.M.B. # 87300-2 McCombs Rd., Chaparral, NM 88081 (Petitioner's Address)
WITNESS the Honorable Jacinto Palomino, District Judge of the Third Judicial District Court of the State of New Mexico, and the seal of the District Court of Dona Ana County, this 6th day of December, 2011.
James H Dempsey
CLERK OF THE DISTRICT COURT
BY: Rosie Stewart, DEPUTY

Publication # 50042
Publication Dates: Jan 8, 15, 22, 29, 2012.

STATE OF NEW MEXICO
COUNTY OF DONA ANA
THIRD JUDICIAL DISTRICT COURT

IN THE MATTER OF A PETITION OF BEN MALDONADO JR. FOR CHANGE OF NAME

Cause No. D-307-CV20112747
Judge Manuel I. Arrieta

NOTICE OF PETITION TO CHANGE NAME

STATE OF NEW MEXICO
COUNTY OF DONA ANA

NOTICE IS HEREBY GIVEN that Ben Maldonado Jr., a resident of the City of LAS CRUCES, County of DONA ANA, State of New Mexico, and over the age of fourteen years, has filed a Petition to Change Name in the THIRD JUDICIAL DISTRICT COURT, DONA ANA COUNTY, New Mexico, wherein HE seeks to change HIS name from Ben Maldonado Jr. To Benny Solis, and that this Petition will be heard before the Honorable Manuel Arrieta, District Judge, on January 30, 2012, at the hour of 11:00 a.m., at the Dona Ana County Courthouse, 201 W. Picacho Ave., Las Cruces, New Mexico.

Clerk of District Court
By Nancy Heavner, Deputy Clerk

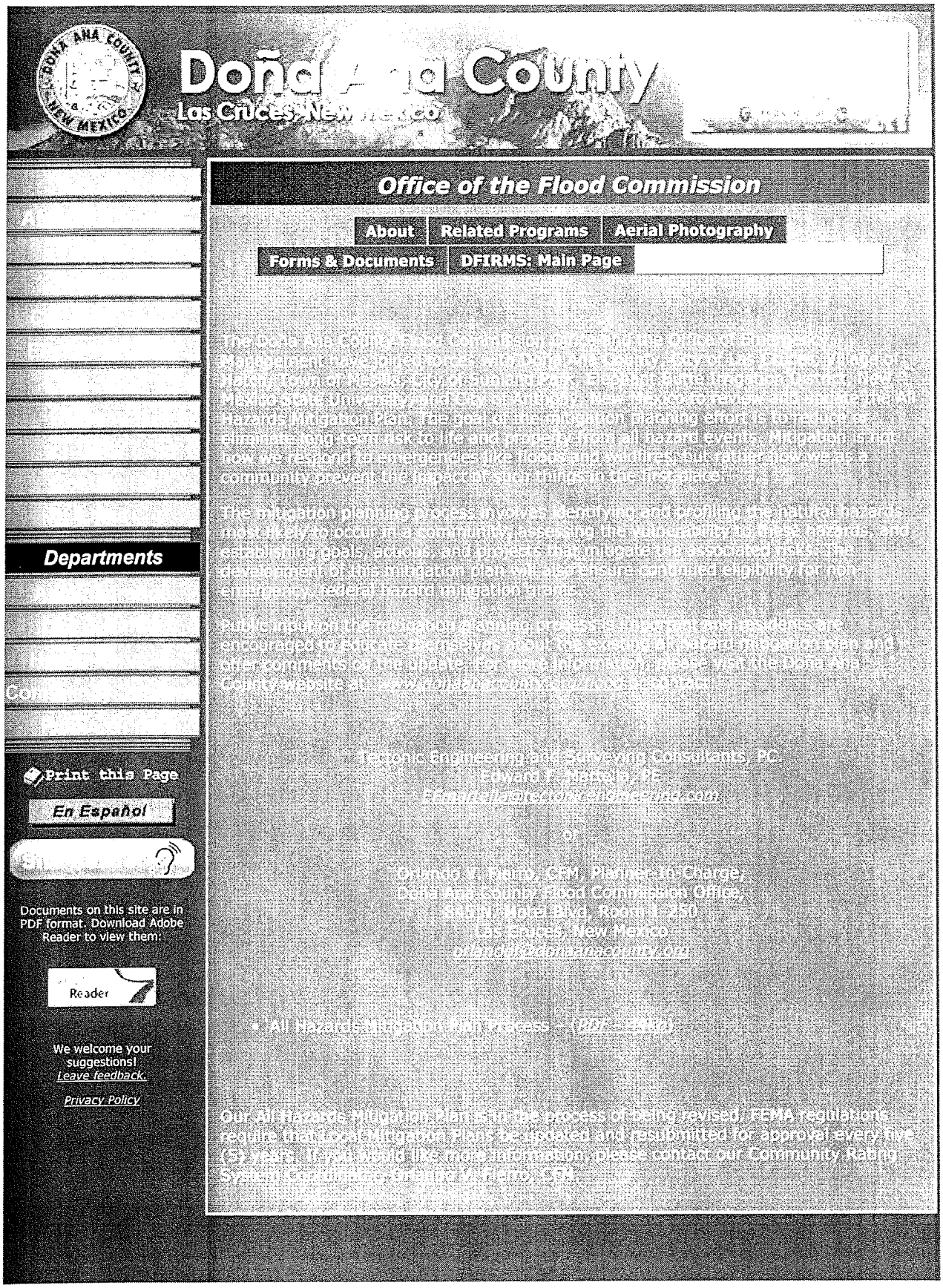
Publication # 50044
Publication Dates: Jan 8, 15, 2012.

Weil Construction, Inc. is soliciting subcontractor bids from DBE, MBE, WBE, etc. for the Las Cruces Intermodal Transit Facility, which bids on 1/12/12, at 2:00pm. Plans are available at City of Las Cruces bid clerks office.

Please fax bids no later 12:00pm, 1/12/12 to 505-899-3033, or e-mail to Chris@weilconstruction.com.

Publication #: 50021
Publication Date: January 8, 9, 2012

Let us help you get rid of your unwanted items. Call to place your classified ads 523-4581.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Las Cruces, New Mexico
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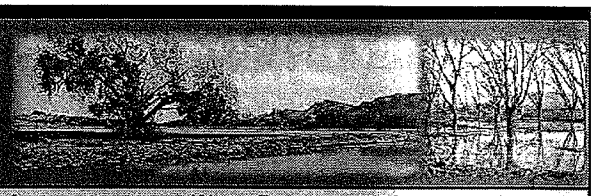
Elephant Butte Irrigation District

General Information & Latest News



General Information & Latest News | Farmer Services | Water Resources Information System

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Is your EBID Account Delinquent? You have more options than you may think. Learn more about your options for you delinquent Farm Rate Account or Flat Rate Account.

Open Procurements
Any Open Invitations for Bids or Requests for Proposals will be found on this page in Microsoft Word format.

General Information & Latest News

DAC All Hazards Mitigation Plan

Doña Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, Elephant Butte Irrigation District, New Mexico State University, and City of Anthony, New Mexico are collaborating to review and update the All Hazards Mitigation Plan. Click on the following links for more information and a link to the plan.

Read complete article...

Notice of Board Election Date

Elephant Butte Irrigation District
Board Election January 5, 2012

The rescheduled EBID Board Election will be held on Thursday, January 5, 2012. Click on the link below for a list of Polling Places.

Read complete article...

Growers Meetings & Presentation

Elephant Butte Irrigation District

**** Growers Meeting Presentation ****

****

If you missed the meetings that were conducted on November 1, 7, and 8, you can view the presentation by clicking here. For the presentation with notes for the legal section, click here.

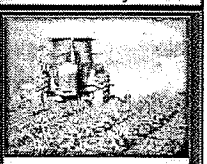
If you submitted a Notice of Intent form for Immature Pecans, the Las Cruces Office of the State Engineer has aerial photographs for the required timeframe. You may contact them at 1680 Hickory Loop, Suite 3, Las Cruces NM or 575-524-6330.

There is not an OSE form for an Affidavit regarding proving beneficial use of groundwater. We showed an example Affidavit in our presentation. You may use the sample as a guide to help you prepare your own Affidavit. Be sure your Affidavit describes all the relevant information pertaining to your situation. Click on the links to view or download the example and the instructions.

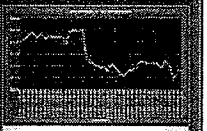
Read complete article...

Stream Adjudication Agreement for Maximum Water Deliveries

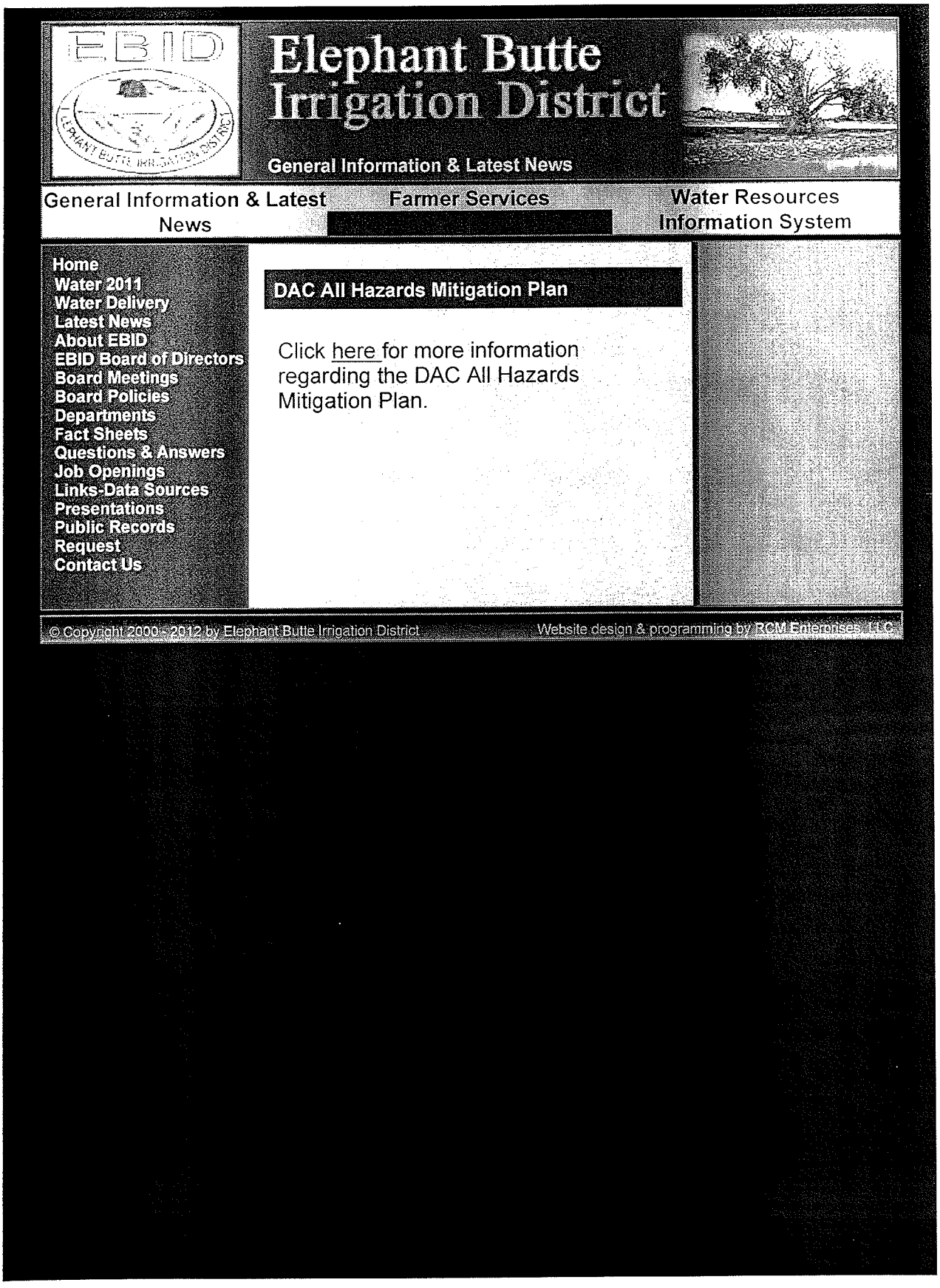
In August 2011, Judge Valentine approved an agreement between agricultural groups and the State Engineer's Office that set maximum water deliveries to agricultural land in



Farmer Services
EBID constituents can view water orders online, check water balances, manage renter agreements, and much more using Farmer Services.



Water Resource Information System
EBID's radio telemetry units are reporting flow and other information 24 hours a day in order to help us manage our water resources efficiently. You can get real time information and view them on our GIS or satellite maps..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DAC All Hazards Mitigation Plan
Click here for more information regarding the DAC All Hazards Mitigation Plan.
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Website design & programming by RCM Enterprises, LLC

DAC All Hazards Mitigation Plan

The Doña Ana County Flood Commission Office and the Office of Emergency Management have joined forces with Doña Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, Elephant Butte Irrigation District, New Mexico State University, and City of Anthony, New Mexico to review and update the All Hazards Mitigation Plan. The goal of the mitigation planning effort is to reduce or eliminate long-term risk to life and property from all hazard events. Mitigation is not how we respond to emergencies like floods and wildfires, but rather how we as a community prevent the impact of such things in the first place.

The mitigation planning process involves identifying and profiling the natural hazards most likely to occur in a community, assessing the vulnerability to these hazards, and establishing goals, actions, and projects that mitigate the associated risks. The development of this mitigation plan will also ensure continued eligibility for non-emergency, federal hazard mitigation grants.

Public input on the mitigation planning process is important and residents are encouraged to educate themselves about the existing all hazard mitigation plan and offer comments on the update. For more information, please visit the Doña Ana County website at: www.donaanacounty.org/flood or contact:

Tectonic Engineering and Surveying Consultants, PC.

Edward F. Martella, PE

EFmartella@tectonicengineering.com

or

Orlando V. Fierro, CFM, Planner-In-Charge,

Doña Ana County Flood Commission Office,

845 N. Motel Blvd, Room 1-250

Las Cruces, New Mexico
orlandof@donaanacounty.org

460

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Resources

- Ordinance-1933 Drainage & Flood Control | City Ordinance for Drainage & Flood Control
- Federal Regulations Code 44 | Federal Drainage & Flood Control Regulations
- List of Engineering Firms | A list of Engineering Firms that can perform the Letter of Map Change [LOMC] process that is required by FEMA for development in the SFHA.
- All Hazard Mitigation Plan | An online copy of the [countywide] Doña Ana County and Incorporated Communities – All Hazards Mitigation Plan [AHMP]
- Notification to Update AHMP ~ Click on the link to the left.
- AHMP Attachments | The Attachments associated with the [countywide] All Hazards Mitigation Plan.
- Preliminary Digital Flood Insurance Rate Map (DFIRM | A link to the Proposed – Preliminary Flood Insurance Rate Map [DFIRM]. The maps are not official and subject to change
- Elevation Certificates | A list of archived Elevation Certificates from 1983 to 2011 – in order by date submitted to the City ~ Click on the link to the left.

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Elevation Certificates

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Update Notification AHMP

The City of Las Cruces and the Office of Emergency Management have joined forces with the Dona Ana County Flood Commission, Village of Hatch, Town of Mesilla, City of Sunland Par, Elephant Butte Irrigation District, New Mexico State Universiy, and City of Anthony, New Mexico to review and update the All Hazards Mitigation Plan. The goal of the mitigation planning effor is to reduce or eliminate long-term risk to life and property from all hazard events. Mitigation is not how we respond to emergencies like floods and wildfires, but rather how we as a community prevent the impact of such things in the first place.

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Public input on the mitigation planning process is very important and residents are encouraged to educate themselves about the existing All Hazard Mitigation Plan and offer comments on the update. For mor information, please visit the City of Las Cruces' Flood Protection Information Web page or contact:

Tectonic Engineering and Surveying Consultants, PC.
Edward F. Martella, PE
EFmartella@tectonicengineering.com

J.D. Padilla, CFM; Floodplain Administrator
City of Las Cruces (Public Works Dept.)
700 N. Main Street (Room 2108C)
Las Cruces, NM 88001
jdpadilla@las-cruces.org

The All Hazards Mitigation Plan that is online has expired and is in the process of being revised. FEMA regulations require that Local Mitigation Plans be pudated and resubmitted for approval every five (5) years. If you would like more information, please contact our Community Rating System Coordinator, J.D. Padilla, CFM.

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New Mexico State University

NMSU is participating in the Doña Ana County All Hazard Mitigation Plan, and information will be provided as it becomes available

The Doña Ana County Flood Commission Office and the Office of Emergency Management have joined forces with Doña Ana County, City of Las Cruces, Village of Hatch, Town of Mesilla, City of Sunland Park, Elephant Butte Irrigation District, New Mexico State University, and City of Anthony, New Mexico to review and update the All Hazards Mitigation Plan. The goal of the mitigation planning effort is to reduce or eliminate long-term risk to life and property from all hazard events. Mitigation is not how we respond to emergencies like floods and wildfires, but rather how we as a community prevent the impact of such things in the first place.

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Tectonic Engineering and Surveying Consultants, PC.
Edward F. Martella, PE
EFmartella@tectonicengineering.com
or
Orlando V. Fierro, CFM, Planner-In-Charge,
Doña Ana County Flood Commission Office,
845 N. Motel Blvd, Room 1-250
Las Cruces, New Mexico
orlandof@donaanacounty.org

Our mission is to:

Efficiently provide a safe, well maintained and environmentally sustainable university community.

LEGAL

Legal Notices 152

ADVERTISEMENT FOR PROPOSAL

Cooperative Educational Services, 4216 Balloon Park Road NE, Albuquerque, NM 87109, will receive sealed proposals until 1:30 p.m. local time, Friday, August 03, 2012, for:

Category 1:Copiers and Multifunctional Digital Equipment
Category 2:Servers, Workstations, Peripherals

its regular meeting to be held on Thursday, July 12, 2012 at 9:00 a.m., in the County Commission Chambers of the Doña Ana County Government Center, 845 N Motel Blvd, Las Cruces, NM 88007

NEW BUSINESS DISCUSSION AND ACTION ITEMS

Case # AP12-001: Submitted by Rafael Guerra and Natalie Mercado, an Appeal Application; appealing a decision by the Community Development Department denying Non Residential Application Case # PDNR (L) 12-003. The applicant is proposing to park 3 commercial vehicles on the property. The 2.00-acre property is addressed as 308 Ristra Street in Berino, NM and is identified as being within Section 3, Township 26 South, Range 3 East, recorded in the office of the Doña Ana County clerk as Instrument # 1117450 on May 11, 2011. It can be further identified by Map Code # 4-016-151-435-421.

Publication #50804
Publication Date: June 24, 2012

Interim Executive Director:
Ms. Robbie R. Levey

General Offices:
926 S. San Pedro St.

Mesilla Valley Public Housing Authority

TELEPHONE (575) 528-2019
FAX (575) 526-8452
LAS CRUCES, NEW MEXICO 88001

IFB# 2012144-001

REQUEST FOR LEGAL SERVICES

The Mesilla Valley Public Housing Authority (MVPHA) will accept proposals from legal firms or individual attorneys licensed in the State of New Mexico who are interested in providing the MVPHA with legal counsel in conducting housing management, renovation, acquisition, closings, and litigation related activities.

Specifications and proposal format are available at the MVPHA located at 926 S. San Pedro Street, Las Cruces, New Mexico 88001-3637. Additionally, specifications and proposal format can be secured by calling (575) 528-2019, by faxing (575) 526-8452 or by e-mail at lmontague@mvpha.org.

Proposals for the position of Solicitor should be submitted to Mr. Lee Montague at the above address, no later than 2:00 p.m. MST on July 23, 2012.

The MVPHA is an Equal Opportunity Employer.

Publication #50762
Publication Dates: June 17, 20, 24, 27 2012

Our employment specialists take the hard work out of finding the right employees.
Call 523-4581 Today

Legal Notices 152

NOTICE OF THE AVAILABILITY OF AN ENVIRONMENTAL ASSESSMENT

The USDA, Rural Development's utility programs (Rural Utilities Service) has received an application for financial assistance from the La Union MDW & SA. As required by the National Environmental Policy Act, the Rural Utilities Service has prepared an Environmental Assessment that evaluated the potential environmental effects and consequences of the proposed project. This notice announces the availability of the Environmental Assessment for public review and comment.

The proposed project (water system improvements including a corrosion filtration

July 2, 2012 at 5:00 PM late RFQs will not be considered.

Publication #50775
Publication Dates: June 21, 22, 23, 24, 2012

deposit.

This Project is funded in whole or in part by a grant from the state of New Mexico Small Cities Community Development Block Grant Program and is subject to requirements of the United States Department of Housing and Urban Development and the funding agency.

Procurement Officer:

Pat Wood
Date: May 16, 2012

Publication #50793
Publication Date: June 24, 2012

NOTICE OF ADOPTION

The City Council of The City of Las Cruces, New Mexico, Hereby Gives Notice of its Adoption of The Following Ordinance at a Regular City Council Meeting Held on June 18, 2012:

1. Council Bill No. 12-033: Ordinance No. 2655: An Ordinance Approving a Zone Change From C-2 (Commercial Medium Intensity) to M-1/M-2C (Industrial Standard Conditional) on 3.138 ± Acres of Land Located on the North Side of Picacho Avenue, 0.20 ± Miles West of Its Intersection With Valley Drive; Parcel ID# 02-01986. Submitted by Manuel M. & Leticia S. Pinon, Property Owners (Z2851).

Copies Are Available for Inspection During Working Hours at the Office of the City Clerk. Witness My Hand and Seal of the City of Las Cruces on this the 19th day of June, 2012.

Esther Martinez, CMC
City Clerk

Publication #50791
Publication Date: June 24, 2012

Notice to Bidders
Notice is hereby given that RFP/Bid responses will be accepted by Sodexo Services to provide food service to one of its retail locations at New Mexico State University.
Copies of the Request for Proposal can be obtained by contacting:
Shelly Duran, Resident District Manager, Sodexo
Shelly.Duran@sodexo.com
575-646-4801
Deadline for Bid Request is June 25, 2012
Completed Bid Requests are due by July 15, 2012
Sodexo Services reserves the right to accept or reject any or all bids and waive informalities therein

Publicatio #50761
Publication Dates: June 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 2012

Notice is hereby given that pursuant to Section 73-10-28 NMSA, the Board of Directors of Elephant Butte Irrigation District will consider a Petition for Inclusion of Additional Lands. The petition is made by Christopher Franzoy, who requests that the Board change DISTRICT Boundaries and include lands owned by Christopher Franzoy, located northwest of Hatch, Dona Ana County, beginning the Northwest cor-

Public Input Invited

All-Hazard Mitigation Plan Update Begins

Hazard mitigation planning is the process used to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property in future hazard events. The process results in a mitigation plan that offers a strategy for breaking the cycle of disaster damage, reconstruction, and repeated damage and a framework for developing feasible and cost-effective mitigation projects. Under the Disaster Mitigation Act of 2000 (Public Law 106-390), local governments are required to develop and maintain a FEMA approved hazard mitigation plan as a condition of eligibility for receiving non-emergency federal hazard mitigation grants.

A multi-jurisdictional steering committee comprised of representatives from Doña Ana County, the Cities of Anthony, Las Cruces, and Sunland Park, the Town of Mesilla, the Village of Hatch, the Elephant Butte Irrigation District, and New Mexico State University, met regularly to review, revise and update the current All-Hazard Mitigation Plan. The steering committee met regularly to review, revise, and/or update the following plan elements:

- Natural hazards that may impact or have impacted the community
- Profiles of the most relevant hazards
- Vulnerability assessment to the identified hazards
- Goals and objectives for hazard risk reduction/elimination
- Mitigation actions/projects to achieve the stated goals and objectives
- Plan maintenance strategy for the next 5-year cycle

If you wish to view and provide comments and feedback on the FINAL DRAFT Mitigation Plan, please visit **http://donaanacounty.org/flood/mitigation/** or contact your community's representative as listed below:

Tectonic Engineering and Surveying Consultants, PC.
Edward F. Martella, PE
EFmartella@tectonicengineering.com

or

Orlando V. Fierro, CFM, Planner-In-Charge.
Doña Ana County Flood Commission Office,
845 N. Motel Blvd, Room 1-250
Las Cruces, New Mexico
(575) 525-5558
orlandof@donaanacounty.org

Publication #50774
Publication Date: June 24, 2012

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Las Cruces Sun-News

ment management system

There will be a Non-Required Pre-Proposal Conference held on Wednesday, July 11, 2012, at 1:30 p.m. local time at the Cooperative Educational Services offices, 4216 Balloon Park Road NE, Albuquerque, NM. To participate in the Pre-Proposal Conference by phone, contact CES' Procurement office by phone at 505-344-5470.

All proposals must be submitted in a sealed envelope marked "SEALED PROPOSAL - RFP 2012-027" on the front of the envelope. A list of qualifications and specifications, instructions to bidders and RFP forms can be obtained upon request by fax (505-344-9343), mail, email (bids@ces.org) or by telephone (505-344-5470) from 8:30 a.m. to 4:30 p.m., Monday-Friday, except holidays.

Cooperative Educational Services reserves the express right to accept or reject any or all bids.

/s/ David Chavez,
Executive Director

Publication #50790
Publication Dates: June 24, July 1, 2012

AGENDA of the DOÑA ANA COUNTY PLANNING AND ZONING COMMISSION

The Doña Ana County Planning and Zoning Commission will consider the following agenda at its regular meeting to be held on Thursday, July 12, 2012 at 9:00 a.m., in the County Commission Chambers of the Doña Ana County Government Center, 845 N Motel Blvd, Las Cruces, NM 88007

NEW BUSINESS DISCUSSION AND ACTION ITEMS

Case # AP12-001: Submitted by Rafael Guerra and Natalie Mercado, an Appeal Application; appealing a decision by the Community Development Department denying Non Residential Application Case # PDNR (L) 12-003. The applicant is proposing to park 3 commercial vehicles on the property. The 2.00-acre property is addressed as 308 Ristra Street in Berino, NM and is identified as being within Section 3, Township 26 South, Range 3 East, recorded in the office of the Doña Ana County clerk as Instrument # 1117450 on May 11, 2011. It can be further identified by Map Code # 4-016-151-435-421.

Publication #50604
Publication Date: June 24, 2012

Interim Executive Director:
Ms. Robbie R. Levey

General Offices:
926 S. San Pedro St.

Mesilla Valley Public Housing Authority

TELEPHONE (575) 528-2019
FAX (575) 526-8452
LAS CRUCES, NEW MEXICO 88001

IFB# 2012144-001

REQUEST FOR LEGAL SERVICES

The Mesilla Valley Public Housing Authority (MVPHA) will accept proposals from legal firms or individual attorneys licensed in the State of New Mexico who are interested in providing the MVPHA with legal counsel in conducting housing management, renovation, acquisition, closings, and litigation related activities.

Specifications and proposal format are available at the MVPHA located at 925 S. San Pedro Street, Las Cruces, New Mexico 88001-3637. Additionally, specifications and proposal format can be secured by calling (575) 528-2019, by faxing (575) 526-8452 or by e-mail at lmontague@mvpha.org.

Proposals for the position of Solicitor should be submitted to Mr. Lee Montague at the above address, no later than 2:00 p.m. MST on July 23, 2012.

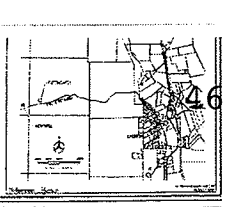
The MVPHA is an Equal Opportunity Employer.

Publication #50762
Publication Dates: June 17, 20, 24, 27 2012

Our employment specialists take the hard work out of finding the right employees.
Call 523-4581 Today

Ms. Sandra Alarcón, Loan Specialist, at (575) 522-8775 Ext. No. 6.

Any person interested in commenting on this proposed project should submit comments to the above addresses by July 22, 2012.



NOTICE OF INVITATION FOR BID

PREBID INFORMATION
Section 00021

Competitive sealed bids will be received by the Owner, for IFB No.: 12-13-8603-0516-841 THE CITY OF TRUTH OR CONSEQUENCES, NEW MEXICO
Project No.: CDBG 11-C-NR-I-01-G41
Project: WILLIAMSBURG ELECTRICAL CIRCUIT UPGRADES
at 505 Sims Street, Truth or Consequences, NM 87901

until July 17, 2012 at 2 p.m. (MDT) at which time bids will be opened and publicly read aloud.
A non-mandatory Pre-Bid Meeting will be held on July 09, 2012 at 11:00 a.m. (MDT) at the office of the Procurement Officer, 505 Sims Street, Truth or Consequences, NM 87901.
Complete sets of the bidding documents may be obtained at the office of the Architect/Engineer WHPACIFIC, INC., 6501 America Parkway NE, Ste 400, Albuquerque, NM 87110, (505) 247-0294 for a $50.00 refundable deposit.

This Project is funded in whole or in part by a grant from the state of New Mexico Small Cities Community Development Block Grant Program and is subject to requirements of the United States Department of Housing and Urban Development and the funding agency.

Procurement Officer:

Pat Wood
Date: May 16, 2012

Publication #50793
Publication Date: June 24, 2012

NOTICE OF ADOPTION

The City Council of The City of Las Cruces, New Mexico, Hereby Gives Notice of Its Adoption of The Following Ordinance at a Regular City Council Meeting Held on June 18, 2012:

1. Council Bill No. 12-033: Ordinance No. 2655: An Ordinance Approving a Zone Change From C-2 (Commercial Medium Intensity) to M-1/M-2C (Industrial Standard Conditional) on 3.138 ± Acres of Land Located on the North Side of Picacho Avenue, 0.20 ± Miles West of Its Intersection With Valley Drive; Parcel ID# 02-01986. Submitted by Manuel M. & Leticia S. Pinon, Property Owners (Z2851).

Copies Are Available for Inspection During Working Hours at the Office of the City Clerk. Witness My Hand and Seal of the City of Las Cruces on this the 19th day of June, 2012.

Esther Martinez, CMC
City Clerk

Publication #50791
Publication Date: June 24, 2012

Notice to Bidders
Notice is hereby given that RFP/Bid responses will be accepted by Sodexo Services to provide food service to one of its retail locations at New Mexico State University.
Copies of the Request for Proposal can be obtained by contacting:
Shelly Duran, Resident District Manager, Sodexo
Shelly.Duran@sodexo.com
575-646-4801
Deadline for Bid Request is June 25, 2012
Completed Bid Requests are due by July 15, 2012
Sodexo Services reserves the right to accept or reject any or all bids and waive informalities therein

Publicatio #50761
Publication Dates: June 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 2012

Notice is hereby given that pursuant to Section 73-10-28 NMSA, the Board of Directors of Elephant Butte Irrigation District will consider a Petition for Inclusion of Additional Lands. The petition is made by Christopher Franzoy, who requests that the Board change DISTRICT Boundaries and include lands owned by Christopher Franzoy, located northwest of Hatch, Dona Ana County, beginning the Northwest corner of Section eighteen (18), Township nineteen (19) South, Range three (3) West, N.M.P.M.; thence North on the East line of Section twelve (12), Township nineteen (19) South, Range four (4) West, N.M.P.M., one-fourth (¼) of a mile; thence, West on the mid East and West line of the Southeast quarter (SE ¼) of said section one-half (½) of a mile to the center of east line of the Southeast quarter of section (12); thence, North on the mid North and South line of said quarter one-fourth (¼) of a mile to the middle corner of section (12);
The place of the hearing is the DISTRICT office located at 530 S. Melendres St., Las Cruces, New Mexico, and the date of hearing is August 8, 2012. Any person or parties interested may appear at the hearing to show cause, in writing, if any they have, why the petition should not be granted. At the end of the hearing the Board of Directors shall take formal action upon the Petition.

Publication #50708
Publication Dates: June 10, 17, 24, 2012

Request for Proposal NM Teen Pregnancy Coalition

NM Teen Pregnancy Coalition is seeking proposals from qualified contractors to provide Grant Writer/ Program Consultant services for a state-wide teen parent program

A scope of work, Proposal Criteria & RFP Submission Process is available upon request by phone at 505-254-8737.

Proposal Deadline: The deadline for the receipt of proposals is 2:00 p.m. June 29, 2012.

SOUTHWESTERN REGIONAL HOUSING AND DEVELOPEMNT CORPORATION (SRHCDC) is accepting RFQ's for the Weatherization Assistance Program. Please contact Henry Montez at 575-546-4181 or 575-386-2386 to request an application and the RFQ General Instructions. SRH&CDC encourages M/WBE, and Labor Surplus Area Firms to apply. All applications must be received to SRH&CDC by July 2, 2012 at 5:00 PM Late RFQs will not be considered.

Publication #50775
Publication Dates: June 20, 21, 22, 23, 24, 2012

Public Input Invited

All-Hazard Mitigation Plan Update Begins

Hazard mitigation planning is the process used to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property in future hazard events. The process results in a mitigation plan that offers a strategy for breaking the cycle of disaster damage, reconstruction, and repeated damage and a framework for developing feasible and cost-effective mitigation projects. Under the Disaster Mitigation Act of 2000 (Public Law 106-390), local governments are required to develop and maintain a FEMA approved hazard mitigation plan as a condition of eligibility for receiving non-emergency federal hazard mitigation grants.

A multi-jurisdictional steering committee comprised of representatives from Doña Ana County, the Cities of Anthony, Las Cruces, and Sunland Park, the Town of Mesilla, the Village of Hatch, the Elephant Butte Irrigation District, and New Mexico State University, met regularly to review, revise and update the current All-Hazard Mitigation Plan. The steering committee met regularly to review, revise, and/or update the following plan elements:

•Natural hazards that may impact or have impacted the community
•Profiles of the most relevant hazards
•Vulnerability assessment to the identified hazards
•Goals and objectives for hazard risk reduction/elimination
•Mitigation actions/projects to achieve the stated goals and objectives
•Plan maintenance strategy for the next 5-year cycle

If you wish to view and provide comments and feedback on the FINAL DRAFT Mitigation Plan, please visit http://donaanacounty.org//flood/mitigation/ or contact your community's representative as listed below:

Tectonic Engineering and Surveying Consultants, PC.
Edward F. Martella, PE
EFmartella@tectonicengineering.com

or

Orlando V. Fierro, CFM, Planner-In-Charge,
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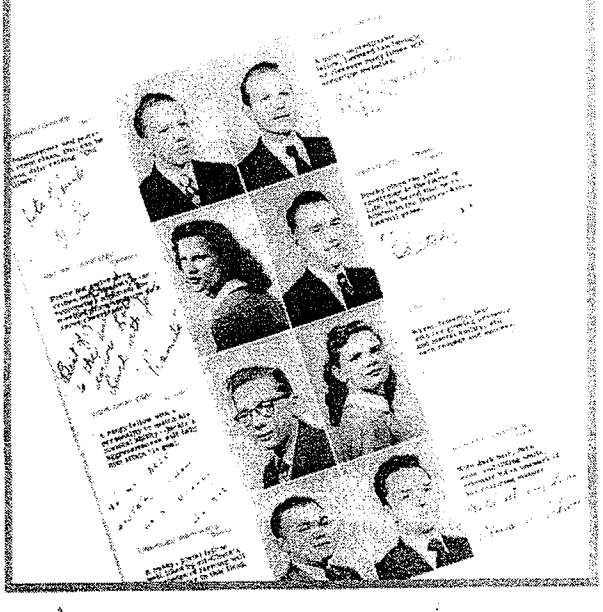

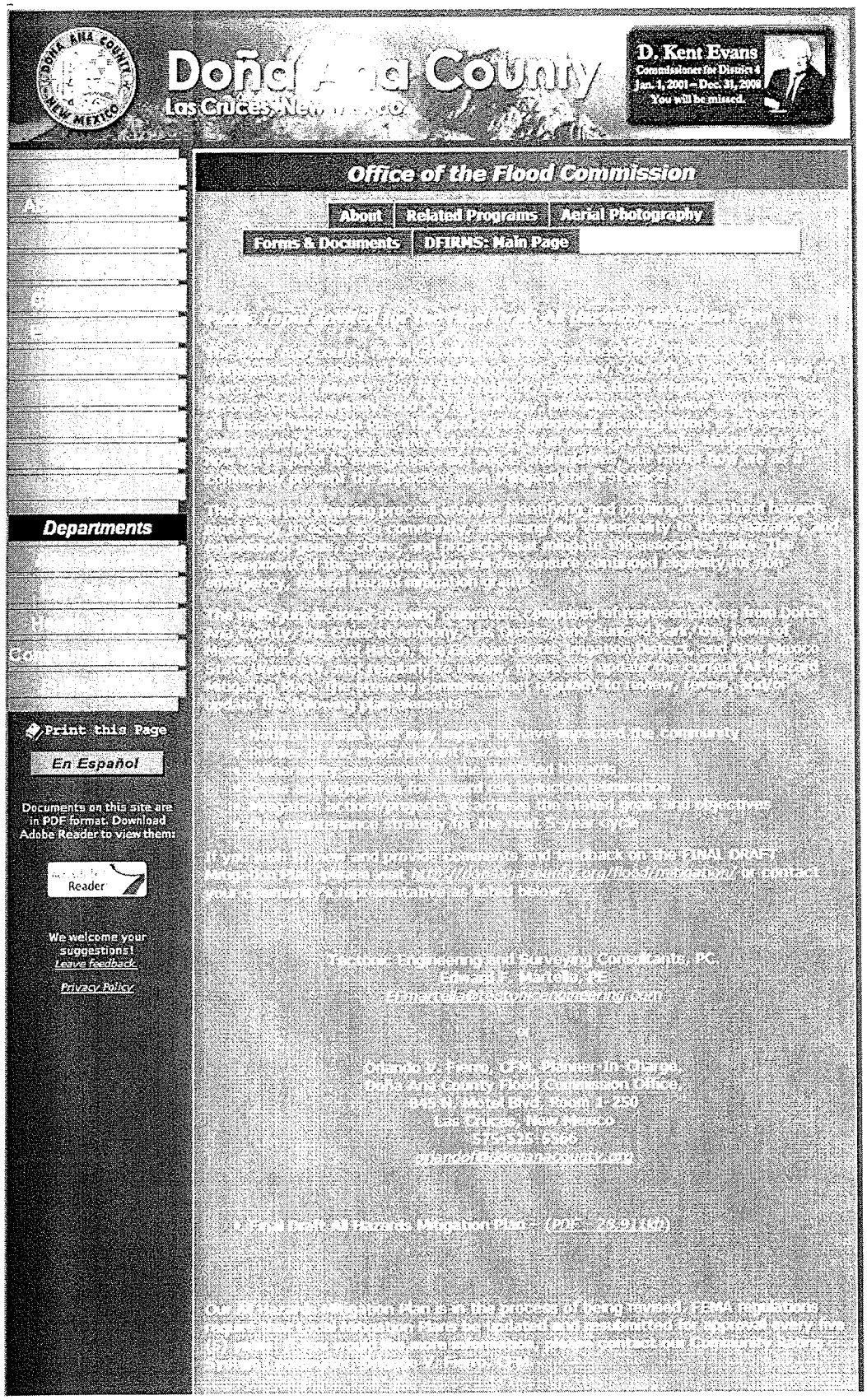
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Las Cruces, New Mexico
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Commissioner for District 4
Jan. 1, 2001 – Dec. 31, 2008
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June 20, 2012

Submitted by jessw on Wed, 06/20/2012 - 6:37am

The Rocket Morning Show with Jack Lutz on FM 99.5 (approx. 7:45-7:50 a.m.)
101 Gold Morning Show with Mike McKay and K.C. Counts (approx. 8:10 - 8:15 a.m.)
Magic 105 Morning Show with Trinity and Thera (approx. 8:17-8:20 a.m.)

This morning I'll talk about: 1) Next Tuesday's meeting of the Doña Ana County Board of Commissioners and various items of interest on the 18-item agenda; 2) DWI-prevention checkpoints and saturation patrols planned during the month of June by the Doña Ana County Sheriff's Department; 3) The donation by the Las Cruces Elks Club of $2,200 for purchase of a utility trailer that will assist the Doña Ana County Sheriff's Department's efforts to prevent drinking and driving; 4) Input being received through July 13 related to rewriting the Doña Ana County mission statement; 5) Public input being sought on the final draft of the Doña Ana County All Hazards Mitigation Plan through the Doña Ana County Flood Commission's offices; 6) A 90-day burn ban that remains in place throughout Doña Ana County, as well as restrictions on the legal use of fireworks during the drought conditions; 7) Free adult cat adoptions during the month of June at the Animal Services Center of the Mesilla Valley; and 8) Upcoming off-site pet adoptions facilitated by the Animal Services Center of the Mesilla Valley. I hope you're able to tune in!

Las Cruces Sun-News

Page A-1 – 2 killed, 3 hurt in I-25 wreck: Two people died and three were injured Tuesday after a tire blew out on a white sport utility vehicle traveling south on I-10 north of Las Cruces. The vehicle flipped. Doña Ana County volunteer firefighters from the Doña Ana and Rincon assisted the New Mexico State Police with responding to the crash.

Page A-2 – Sound Off!: Two callers have opinions about county matters. Caller One asserts that animal control officers have their priorities wrong by telling him to take his cats indoors. Caller Two says chihuahuas constantly attack his pit bulls.

* Page A-5 – Two pet adoption events Saturday: The Animal Services Center of the Mesilla Valley will facilitate pet adoptions this Saturday at the Farmers' Market in Downtown Las Cruces and at PetCo on East Lohman, also in Las Cruces.

Albuquerque Journal

LATE DELIVERY: If there are any stories in today's Journal mentioning Doña Ana County, the Media Round Up will be updated later today.

El Paso Times

No Doña Ana County content.

New Mexico Political Web Logs

Heath Haussamen's web log –Haussamen, a political analyst and journalist, posts news items continually throughout each day. It's a good bet Doña Ana County will be regularly featured. View the blog online at http://nmpolitics.net

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* Indicates that all or most of the information in the story was derived from a press release issued by the Doña Ana County Public Information Office and/or the Doña Ana County Sheriff's Department.

Source URL: http://elsol/node/6226

Community Liaison to the Doña Ana County Board of Commissioners

Contact

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Community Liaison

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Jess C. Williams interacts with the public to identify areas of concern within all five commission districts in Doña Ana County, then works with the appropriate commissioners, management and staff to address specific complaints, to track progress through assigned departments, to keep the County Manager updated and to communicate back to the constituents and the County Commissioners the recommended courses of action and project timelines.

You can reach Jess Williams at (575) 525-5801 or by e-mail at input@donaanacounty.org. Messages left on Voicemail or on e-mail will generally be returned in person within five business days. You can also mail your concerns to:

Jess C. Williams
Community Liaison to the Doña Ana County Board of Commissioners
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845 N. Motel Blvd.
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Appendix E

Detailed Historic Hazard Documentation

Dona Ana County Historic Hazard Events October 1956 to September 2011				
Hazard	No. of Records	Recorded Losses		
		Fatalities	Injuries	Damage Costs ($)
Drought	4	0	0	$280,000
Dam Failure	0	0	0	$0
Earthquake	4	0	0	$0
Expansive Soils	0	0	0	$0
Extreme Heat/Cold	3	0	0	$585,870
Flood	51	0	0	$16,623,467
Hail	52	0	0	$17,260,743
HAZMAT Incident	43	1	34	$0
Heavy Snow	5	0	0	$0
Landslide	0	0	0	$0
Land Subsidence	0	0	0	$0
Lightning	3	0	0	$19,669
Severe Wind	85	0	2	$2,963,197
Volcanoes	0	0	0	$0
Wildfire	5	0	1	$0

Notes:
- SEVERE WIND category includes all events with damaging winds (High Wind, Tornado, Microburst, Macroburst, Gustnadoes, etc.)
- Damage Costs include property and crop/livestock losses and are reported as is with no attempt to adjust costs to current dollar values. Furthermore, wildfire damage cost do not include the cost of suppression which can be quite substantial.
- Sources: NCDC, NWCG, NWS, USFS, DAC, NMDHSEM

Date	Hazard	Description
10/17/1956	Hail	1 inch hail event
7/29/1959	Severe Wind	
7/29/1959	Severe Wind	F1 tornado event
10/18/1962	Hail	0.75 inch hail event
6/10/1965	Hail	1 inch hail event
4/21/1966	Severe Wind	62 knot wind speeds reported
6/10/1966	Hail	0.75 inch hail event
9/7/1966	Severe Wind	F0 tornado event
6/15/1969	Hail	2.25 inch hail event
9/2/1969	Severe Wind	
10/8/1969	Hail	1 inch hail event
10/4/1970	Hail	1.25 inch hail event
9/19/1972	Severe Wind	F0 tornado event
9/20/1972	Flood	Heavy rains and flooding that resulted in a disaster declaration (FEMA-DR-353). Local officials estimated damages for Dona Ana County to be about $212,000 for public facilities and over $500,000 to private businesses and residents.
5/12/1973	Hail	1.75 inch hail event
7/21/1973	Severe Wind	
6/29/1974	Severe Wind	
10/22/1974	Hail	1 inch hail event
8/3/1975	Severe Wind	
1/4/1977	Earthquake	Magnitude 3.2 earthquake. No reported damages or injuries
5/20/1978	Hail	0.75 inch hail event
7/31/1979	Severe Wind	F1 tornado event
8/3/1984	Flood	Doña Ana County experienced heavy rainfall that caused flooding in many locations. In the Chaparral area, homes were surrounded by water and dirt streets were turned into lakes that were impassible due to siltation and flooding. Pumping was required to alleviate the problems.
6/5/1985	Earthquake	Magnitude 2.9 earthquake. No reported damages or injuries
9/6/1985	Earthquake	Magnitude 2.6 earthquake. No reported damages or injuries
4/17/1986	Earthquake	Magnitude 2.7 earthquake. No reported damages or injuries
7/22/1987	Severe Wind	F0 tornado event
8/8/1987	Severe Wind	
8/23/1987	Flood	Over three inches of rainfall was recorded. Floodwater inundated homes, business, schools, and hundreds of acres of farmland, and over-taxed irrigation canals. Approximately $667,000 in damages was reported by the County. The arroyos east of the Rio Grande in the City of Las Cruces were among the areas affected by the floodwaters.
8/22/1988	Severe Wind	
9/22/1988	Severe Wind	F0 tornado event
9/22/1988	Hail	0.75 inch hail event
11/8/1988	Hail	1.75 inch hail event
5/27/1989	Hail	1.75 inch hail event
5/27/1989	Severe Wind	
6/13/1989	Severe Wind	89 knot winds reported
7/28/1989	Severe Wind	F1 tornado event
7/22/1990	Severe Wind	61 knot wind speeds reported
5/20/1991	Hail	2.5 inch hail event
5/21/1991	Hail	1.75 inch hail event
7/1/1991	Severe Wind	
1/12/1992	Severe Wind	
1/22/1992	HAZMAT Incident	STORAGE TANK/ BURST DISK FAILURE. 60 POUND(S) OF NITROGEN TETROXIDE WAS RELEASED TO AIR.
2/24/1992	HAZMAT Incident	CAPACITATOR / RUPTURED DUE TO POWER OUTAGE. 0.99 GALLON(S) OF POLYCHLORINATED BIPHENYLS WAS RELEASED TO MATERIAL SPILLED ONTO A TRANSMITTER.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
10/17/1956	Hail		0	0	$0	$0	$0	NCDC, 2011
7/29/1959	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
7/29/1959	Severe Wind		0	0	$2,500	$0	$2,500	NCDC, 2011
10/18/1962	Hail		0	0	$0	$0	$0	NCDC, 2011
6/10/1965	Hail		0	0	$0	$0	$0	NCDC, 2011
4/21/1966	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
6/10/1966	Hail		0	0	$0	$0	$0	NCDC, 2011
9/7/1966	Severe Wind		0	0	$250	$0	$250	NCDC, 2011
6/15/1969	Hail		0	0	$0	$0	$0	NCDC, 2011
9/2/1969	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
10/8/1969	Hail		0	0	$0	$0	$0	NCDC, 2011
10/4/1970	Hail		0	0	$0	$0	$0	NCDC, 2011
9/19/1972	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
9/20/1972	Flood		0	0	$712,000	$0	$712,000	SHELDUS, 2012; FEMA; Las Cruces Sun Times, 1972
5/12/1973	Hail		0	0	$0	$0	$0	NCDC, 2011
7/21/1973	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
6/29/1974	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
10/22/1974	Hail		0	0	$0	$0	$0	NCDC, 2011
8/3/1975	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
1/4/1977	Earthquake	Las Cruces	0	0	$0	$0	$0	USGS, 2011
5/20/1978	Hail		0	0	$0	$0	$0	NCDC, 2011
7/31/1979	Severe Wind		0	0	$25,000	$0	$25,000	NCDC, 2011
8/3/1984	Flood	Chaparral	0	0	$0	$0	$0	2004 Plan
6/5/1985	Earthquake	Las Cruces	0	0	$0	$0	$0	USGS, 2011
9/6/1985	Earthquake	Las Cruces	0	0	$0	$0	$0	USGS, 2011
4/17/1986	Earthquake	Las Cruces	0	0	$0	$0	$0	USGS, 2011
7/22/1987	Severe Wind		0	0	$250,000	$0	$250,000	NCDC, 2011
8/8/1987	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
8/23/1987	Flood		0	0	$667,000	$0	$667,000	2004 Plan
8/22/1988	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
9/22/1988	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
9/22/1988	Hail		0	0	$0	$0	$0	NCDC, 2011
11/8/1988	Hail		0	0	$0	$0	$0	NCDC, 2011
5/27/1989	Hail		0	0	$0	$0	$0	NCDC, 2011
5/27/1989	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
6/13/1989	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
7/28/1989	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
7/22/1990	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
5/20/1991	Hail		0	0	$0	$0	$0	NCDC, 2011
5/21/1991	Hail		0	0	$0	$0	$0	NCDC, 2011
7/1/1991	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
1/12/1992	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
1/22/1992	HAZMAT Incident				$0	$0	$0	NRC, 2011; #104155
2/24/1992	HAZMAT Incident				$0	$0	$0	NRC, 2011; #107989

Date	Hazard	Description
7/28/1992	HAZMAT Incident	A VACUUM TRUCK HAD A DEFECTIVE HOSE AND RELEASED MATERIAL DURINGTRANSFER FROM A 8 INCH PIPELINE TO THE TRUCK. 30 BARREL(S) OF OIL: DIESEL WAS RELEASED TO SOIL.
8/18/1992	HAZMAT Incident	2 RAIL TANK CARS/ LOOSE FILLER CAPS. 0.99 GALLON(S) OF ETHYL ALCOHOL WAS RELEASED TO RAILCAR.
3/11/1993	Severe Wind	Thunderstorm winds were estimated at 55 knots (63 mph) at the Las Cruces airport at 1625 MST.
10/23/1993	HAZMAT Incident	DOME VALVE ON TANK CAR / THE RELEASE IS CAUSED BY OVERPRESSURIZATIONOF TANK. 120 GALLON(S) OF STYRENE WAS RELEASED TO SOIL / GRAVEL.
3/18/1994	HAZMAT Incident	PHOTO PROCESSING UNIT/LINE RUPTURED IN UNIT RESULTING IN RELEASE. 5 GALLON(S) OF SILVER BEARING WASTE WAS RELEASED TO SEWAGE TREATMENT PLANT.
5/12/1994	HAZMAT Incident	TRANSFORMER/OVERHEATING CAUSED SPILL. 0 UNKNOWN AMOUNT OF TRANSFORMER COOLANT FREON WAS RELEASED TO ATMOSPHERE.
5/15/1994	Severe Wind	An early evening thunderstorm produced wind gusts estimated at 65 mph which blew over several utility poles and damaged several small sheds and carports.
5/21/1994	Hail	A short, but intense hail storm ravaged fields of chile, cotton and pecans. Hail to one-half inch accumulated to nearly six inches deep in a few locations.
6/14/1994	Severe Wind	Winds knocked down several utility poles and caused damage to porch covers and a few roofs. Several large dust devils were observed in the area.
7/1/1994	HAZMAT Incident	CALLER REPORTS PRP IS DUMPING OIL FILTERS AND OIL ONTO THE GROUND. 0 UNKNOWN AMOUNT OF OIL FILTERS WAS RELEASED TO DIRT AND GRASS.
7/7/1994	HAZMAT Incident	CALLER STATES RP IS CHANGING THE OIL IN HIS CAR AND DUMPING IT ON HISPROPERTY. 0 UNKNOWN AMOUNT OF OIL, MISC: MOTOR WAS RELEASED TO SOIL//3FT X 3FT.
7/28/1994	Flood	Heavy rains up to three inches produced flooding in several businesses, an apartment complex, and a church day care center. Damage was estimated at $5 million.
7/28/1994	HAZMAT Incident	EQUIPMENT FAILURE ON A PHOTOPROCESSING UNIT. 1 GALLON(S) OF SODIUM DISULFATE WAS RELEASED TO BASE SEWER.
10/26/1994	HAZMAT Incident	COOLING SYSTEM/RELIEF VALVE BLEW RESULTING IN RELEASE. 400 GALLON(S) OF AMMONIA, ANHYDROUS WAS RELEASED TO ATMOSPHERE.
6/12/1995	HAZMAT Incident	55 GALLON DRUM//ROLLED OFF OF A PICK-UP TRUCK. 25 GALLON(S) OF FERROUS CHLORIDE WAS RELEASED TO PAVEMENT.
7/12/1995	HAZMAT Incident	HYDRO PLUGS/MECHANICAL LEAK. 30 OTHER OF HYDRAULIC OIL WAS RELEASED TO ATMOSPHERE.
8/30/1995	HAZMAT Incident	STORAGE TANK/"QUICK DISCONNECT" FAILED. 55 POUND(S) OF NITROGEN TETROXIDE WAS RELEASED TO ATMOSPHERE.
10/4/1995	Severe Wind	Gusty winds felled several antennas and tree limbs onto power lines causing at least four transformer explosions and grass fires in Las Cruces.
11/1/1995	Extreme Heat/Cold	Unusually warm conditions persisted throughout the month across New Mexico resulting in a number of daily record high temperatures, several new records for monthly average temperature and a two to four week delay in first fall freeze. Both Los Alamos and Albuquerque set new daily highs on three occasions each. A high of 74 degrees on the 26th at Albuquerque set a new record for warmest so late in the year.
2/2/1996	HAZMAT Incident	BAGHOUSE BAGS / MATERIAL WAS ACCIDENTLY PICKED UP BY A GARBAGE TRUCKAND TAKEN TO A LANDFILL. 0 UNKNOWN AMOUNT OF ARSENIC TRIOXIDE WAS RELEASED TO SOIL.
3/1/1996	HAZMAT Incident	TANK / VALVE LEAKED. 1000 POUND(S) OF NITROGEN TETROXIDE WAS RELEASED TO SOIL.
5/1/1996	Drought	State declaration of drought disaster primarily for the loss of domestic drinking water
7/15/1996	Flood	Heavy rain from a thunderstorm flooded 9 homes and 7 vehicles near Anthony, New Mexico. Several of the homes were temporarily evacuated. A mudslide was reported at Exit "0" of Interstate 10 along the New Mexico-Texas border.
10/16/1996	HAZMAT Incident	BOL: "1 WOODEN CRATE, 680 GRP, ACCESSOR, RQ, RADIOACTIVE MATERIAL,SPECIAL FORM, N.O.S., CLASS 7 U.N. 2974 COBALT 60 99.0 CURIES, T.I. 1.0. 0 UNKNOWN AMOUNT OF COBALT WAS RELEASED TO ATMOSPHERE.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
7/28/1992	HAZMAT Incident				$0	$0	$0	NRC, 2011; #129337
8/18/1992	HAZMAT Incident				$0	$0	$0	NRC, 2011; #132485
3/11/1993	Severe Wind	Las Cruces	0	0	$0	$0	$0	NCDC, 2011
10/23/1993	HAZMAT Incident				$0	$0	$0	NRC, 2011; #204418
3/18/1994	HAZMAT Incident				$0	$0	$0	NRC, 2011; #230708
5/12/1994	HAZMAT Incident				$0	$0	$0	NRC, 2011; #239139
5/15/1994	Severe Wind	Las Cruces	0	0	$0	$0	$0	NCDC, 2011
5/21/1994	Hail	Las Cruces	0	0	$0	$0	$0	NCDC, 2011
6/14/1994	Severe Wind	Las Cruces	0	0	$0	$0	$0	NCDC, 2011
7/1/1994	HAZMAT Incident				$0	$0	$0	NRC, 2011; #248126
7/7/1994	HAZMAT Incident				$0	$0	$0	NRC, 2011; #248224
7/28/1994	Flood	Las Cruces	0	0	$5,000,000	$0	$5,000,000	NCDC, 2011
7/28/1994	HAZMAT Incident				$0	$0	$0	NRC, 2011; #252522
10/26/1994	HAZMAT Incident			29	$0	$0	$0	NRC, 2011; #267235
6/12/1995	HAZMAT Incident				$0	$0	$0	NRC, 2011; #295238
7/12/1995	HAZMAT Incident				$0	$0	$0	NRC, 2011; #299927
8/30/1995	HAZMAT Incident				$0	$0	$0	NRC, 2011; #305937
10/4/1995	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
11/1/1995	Extreme Heat/Cold	Statewide	0	0	$0	$0	$0	NCDC, 2011
2/2/1996	HAZMAT Incident				$0	$0	$0	NRC, 2011; #324129
3/1/1996	HAZMAT Incident				$0	$0	$0	NRC, 2011; #329111
5/1/1996	Drought	Statewide	0	0	$0	$0	$0	NM State Hazard Mitigation Plan, 2010
7/15/1996	Flood	ANTHONY	0	0	$0	$0	$0	NCDC, 2011
10/16/1996	HAZMAT Incident				$0	$0	$0	NRC, 2011; #364610

Date	Hazard	Description
1/6/1997	Heavy Snow	A major winter storm brought snow to most of New Mexico with 3 to 6 inches of snow common at valley locations in the local area and significantly heavier amounts in the mountains. 1280 motorists were stranded in Truth or Consequences as Interstate 25 was closed for most of the distance between Las Cruces and a point about 30 miles north of Socorro. Interstate 10 was also closed between El Paso, Texas and the Arizona border. Several other state or U.S. highways were either closed due to the storm or partially blocked due to traffic accidents. As a result of these road closures, an estimated 400 people were forced stay overnight in the Pan American Center on the Campus of New Mexico State University after a concert.
5/31/1997	Hail	1.75 inch hail event
6/7/1997	Hail	1.5 inch hail event
6/7/1997	Hail	1.5 inch hail event
6/7/1997	Hail	1 inch hail event
8/1/1997	Flood	A severe thunderstorm produced an estimated two inches of rain, significant street flooding, and downed a number of trees in the urban area. In addition, the public reported 3/4 inch hail in the downtown area.
8/1/1997	Hail	0.75 inch hail event
2/24/1998	Severe Wind	Winds gusted briefly to 60 mph at the El Paso International Airport just south of Chaparral, NM with the passage of a cold front. Two roofs were blown off in Chaparral, one from a mobile home and one from a site-built structure.
7/8/1998	Severe Wind	A wet microburst, associated with a strong thunderstorm, produced significant damage to a barn and several mobil homes in addition to several trees. Several utility poles were also damaged and there was localized street flooding. The damage path was roughly 200 yards by 500 yards.
7/22/1998	Severe Wind	A wet microburst produced damage to several mobile homes in a small area about 5 miles west of Organ. Three mobile homes were either tipped over or rolled, with two others shifted off their cinder block foundations. None of the mobile homes were tied down. In at least one case, localized flooding contributed to the damage.
7/29/1998	HAZMAT Incident	TANK TRUCK / HOSE FITTING FAILURE CAUSED RELEASE OF THE PRODUCT THETRUCK WAS TRANSPORTING. 50 GALLON(S) OF FERROUS CHLORIDE SOLUTION (30 PERCENT) WAS RELEASED TO SOIL.
11/9/1998	Severe Wind	A weather spotter reported a wind gust of 72 mph during the passage of a cold front.
1/21/1999	Severe Wind	High winds associated with a strong coldfront moving through the area caused widespread but mostly minor damage.
5/24/1999	Hail	1 inch hail event
5/24/1999	Hail	1.75 inch hail event
6/17/1999	Flood	Three to four inches of rain fell in the East Mesa area of Las Cruces. Water running off the nearby Organ Mountains caused considerable damage to mobile homes, homes and washed out roads. The high water had some residents on the east side of Las Cruces trapped in their homes for several hours. A 70 year old woman had to be rescued after trying to cross a flooded road in her car.
8/3/1999	Hail	0.75 inch hail event
12/14/1999	HAZMAT Incident	A LANCE MISSILE MISSED IT'S TARGET / UNKNOWN IF A RELEASE HAS OCCURRED. 0 UNKNOWN AMOUNT OF UNSYMMETRICAL DIMETHYLHYDRAZINE WAS RELEASED TO PLAYA LAKE?.
5/1/2000	Drought	State declaration of drought disaster primarily for the loss of domestic drinking water
6/1/2000	HAZMAT Incident	THE MATERIAL WAS SPILLED FROM A PIPELINE DUE TO A ROAD GRADER STRIKING THE LINE.. 0 UNKNOWN AMOUNT OF OIL: DIESEL WAS RELEASED TO .
6/19/2000	Severe Wind	A 66 mph wind gust was measured at the National Weather Service office in Santa Teresa.
8/30/2000	Hail	1 inch hail event
10/23/2000	Severe Wind	A low top supercell with a weakly rotating wall cloud was accompanied by 70 mph winds, 1/4 to 1/2 inch hail which completely covered the ground, and 0.9 inches of rain in less than 10 minutes as it passed over the Mesilla Park area.
10/28/2000	Flood	A slow-moving line of thunderstorms dropped heavy rain on southern Dona Ana County, resulting in significant street flooding in Anthony.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
1/6/1997	Heavy Snow		0	0	$0	$0	$0	NCDC, 2011
5/31/1997	Hail	ORGAN	0	0	$0	$0	$0	NCDC, 2011
6/7/1997	Hail	LAS CRUCES	0	0	$3,500,000	$0	$3,500,000	NCDC, 2011
6/7/1997	Hail	WHITE SANDS	0	0	$0	$0	$0	NCDC, 2011
6/7/1997	Hail	HATCH	0	0	$0	$0	$0	NCDC, 2011
8/1/1997	Flood	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
8/1/1997	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
2/24/1998	Severe Wind		0	0	$25,000	$0	$25,000	NCDC, 2011
7/8/1998	Severe Wind	FT SELDEN	0	0	$0	$0	$0	NCDC, 2011
7/22/1998	Severe Wind	ORGAN	0	0	$0	$0	$0	NCDC, 2011
7/29/1998	HAZMAT Incident				$0	$0	$0	NRC, 2011; #448123
11/9/1998	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
1/21/1999	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
5/24/1999	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
5/24/1999	Hail	PICACHO	0	0	$0	$0	$0	NCDC, 2011
6/17/1999	Flood	LAS CRUCES	0	0	$300,000	$0	$300,000	NCDC, 2011
8/3/1999	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
12/14/1999	HAZMAT Incident				$0	$0	$0	NRC, 2011; #509078
5/1/2000	Drought	Statewide	0	0	$0	$0	$0	NM State Hazard Mitigation Plan, 2010
6/1/2000	HAZMAT Incident				$0	$0	$0	NRC, 2011; #530770
6/19/2000	Severe Wind	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
8/30/2000	Hail	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
10/23/2000	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
10/28/2000	Flood	ANTHONY	0	0	$0	$0	$0	NCDC, 2011

Date	Hazard	Description
1/17/2001	Heavy Snow	A band of heavy snow extended from southwest to northeast across southern New Mexico from the "bootheel" to Elephant Butte Reservoir, mainly below 6000 feet elevation. Oddly, the portion of the cold upper low which favored the production of heavy snow remained between, not over the mountain ranges to either side. The southern bootheel, near the Mexican border, received 6 to 10 inches of snow, while the remainder of the area was blanketed with 2 to 4 inches (with isolated 6 inch reports). The higher mountains to the east and west were left with only 1 to 2 inches of snow.
4/6/2001	Severe Wind	A strong cold front moved eastward across southern New Mexico during the early afternoon hours, bringing numerous wind gusts in the 65 to 75 mph range. Some trees were blown over in the Las Cruces area, along with numerous reports of roof damage. Blowing dust was extensive in southern Otero County.
4/10/2001	Severe Wind	The second high wind event within 5 days occurred in southern New Mexico. This one, although containing slightly lower peak gusts (60 to 70 mph with a few reports of 75 mph), continued for a much longer period and over a larger area. Trees were downed, windows broken, and power poles were blown over. A power outage in southern Dona Ana County lasted for more than 2 hours.
6/19/2001	Severe Wind	A weak F0 tornado (landspout), which began as a dust devil that eventually moved under a developing thunderstorm, stayed on the ground for 15 minutes just east of Las Cruces. It remained over open country but was observed by thousands. Unrelated wind damage from 45 mph thunderstorm outflow elsewhere in the city was falsely attributed to this landspout.
8/25/2001	Severe Wind	A wet microburst blew the roof off a portion of an apartment complex. Some windows were blown out in the downtown area, and several power lines were downed.
1/2/2002	HAZMAT Incident	THE MATERIAL RELEASED OUT OF THE SIX INCH PVC SEWER PIPE LINE DUE TO WATER HAMMER DAMAGE.. 800 GALLON(S) OF RAW SEWAGE WAS RELEASED TO RIGHT OF WAY ON MCNUTT ROAD > DESERT SAND.
2/27/2002	HAZMAT Incident	THE REPORT STATED FOR THE LAST 23 YEARS THIS COMPANY HAS BEEN DUMPING AND BURYING SOLID WASTE AND FLUIDS FROM VEHICLES ON COMPANY PROPERTY AND ON PRIVATE PROPERTY WHICH SURROUNDS THE BUSINESS.. 0 UNKNOWN AMOUNT OF FLUIDS/ SOILD WASTE FROM VEHICLES WAS RELEASED TO SOIL < DONA ANA WATER COMPANY WELL.
3/12/2002	HAZMAT Incident	THE RESPONSIBLE PARTY HAD 6-7 ASBESTOS PIPES 14FT IN LENGTH AND 14 INCHES IN DIAMETER THAT WERE BROKEN UP INTO PIECES AND PLACED INTO A TAN DUMPSTER.. 0 UNKNOWN AMOUNT OF ASBESTOS WAS RELEASED TO RAIN WATER.
5/1/2002	Drought	State declaration of drought disaster primarily for the loss of domestic drinking water. Cost reported is cumulative for period of 1995-2007. The state estimates indirect costs of drought to be between $50 and $100 million for the same period.
5/30/2002	HAZMAT Incident	THE CALLER REPORTED THAT AN EPA INSPECTOR DISCOVERED AN AMMONIUM NITRATE SPILL AT LOCATION DUE TO CORROSSION OF STORAGE SILO.. 1000 POUND(S) OF AMMONIUM NITRATE WAS RELEASED TO SOIL.
7/2/2002	Severe Wind	Thunderstorm outflow winds measured at 63 mph blew down a 63 year old oak tree that narrowly missed a house but crashed down upon a parked car.
7/4/2002	Severe Wind	Winds estimated at 65 mph reduced visibilities to 500 feet in blowing sand in Chaparral.
7/16/2002	Flood	A cluster of thunderstorms dropped nearly 4 inches of rain within an hour according to a RAWS rain gauge located in the Sierra de Las Uvas Mountains. The resulting runoff washed out Highway 185 between Radium Springs and Rincon.
7/30/2002	Flood	Runoff from a thunderstorm over the Franklin Mountains caused an arroyo to fill to a depth of 10 feet. The frontage roads near the arroyo were covered with water, and extensive ponding resulted downstream.
8/2/2002	Severe Wind	A small F0 tornado, most likely a landspout, was observed on the ground for 9 minutes south of U.S. 70 and northeast of the White Sands Missile Range Headquarters.
8/8/2002	Severe Wind	A nearly stationary thunderstorm over downtown Las Cruces produced a 75 mph wet microburst which resulted in structural damage in a very localized area. A roof was lifted from a house and blown over a fence into a neighboring yard, while stop signs were literally flattened. Urban flooding from 1.4 inches of rain in 30 minutes led to the closure of a major intersection as water pushed off a manhole cover.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
1/17/2001	Heavy Snow		0	0	$0	$0	$0	NCDC, 2011
4/6/2001	Severe Wind		0	0	$20,000	$0	$20,000	NCDC, 2011
4/10/2001	Severe Wind		0	0	$55,000	$0	$55,000	NCDC, 2011
6/19/2001	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
8/25/2001	Severe Wind	LAS CRUCES	0	0	$30,000	$0	$30,000	NCDC, 2011
1/2/2002	HAZMAT Incident	NORTH LIFT STATION			$0	$0	$0	NRC, 2011; #590031
2/27/2002	HAZMAT Incident	THE LOCATION SITS BETWEEN A FLOOD DAM AND A PUBLIC DRINKING WATER WELL			$0	$0	$0	NRC, 2011; #600919
3/12/2002	HAZMAT Incident	SOUTHWESTERN PORTION OF THE PROPERTY			$0	$0	$0	NRC, 2011; #596283
5/1/2002	Drought	Statewide	0	0	$280,000	$0	$280,000	NM State Hazard Mitigation Plan, 2010
5/30/2002	HAZMAT Incident	INTERSECTION OF RAILROAD AVE STATE HWY 85. ABANDONED STORAGE SITE			$0	$0	$0	NRC, 2011; #607343
7/2/2002	Severe Wind	LAS CRUCES	0	0	$1,000	$0	$1,000	NCDC, 2011
7/4/2002	Severe Wind	ANTHONY	0	0	$0	$0	$0	NCDC, 2011
7/16/2002	Flood	RADIUM SPGS	0	0	$20,000	$0	$20,000	NCDC, 2011
7/30/2002	Flood	MESQUITE	0	0	$0	$0	$0	NCDC, 2011
8/2/2002	Severe Wind	ORGAN	0	0	$0	$0	$0	NCDC, 2011
8/8/2002	Severe Wind	LAS CRUCES	0	0	$20,000	$0	$20,000	NCDC, 2011

Date	Hazard	Description
8/8/2002	Flood	A nearly stationary thunderstorm over downtown Las Cruces produced a 75 mph wet microburst which resulted in structural damage in a very localized area. A roof was lifted from a house and blown over a fence into a neighboring yard, while stop signs were literally flattened. Urban flooding from 1.4 inches of rain in 30 minutes led to the closure of a major intersection as water pushed off a manhole cover.
8/10/2002	Severe Wind	A line of strong to severe thunderstorms moved from northeast to southwest across southern NM with damaging winds and large hail. Trees were downed and a mobile home flipped near Garfield, while 1 1/4 inch diameter hail fell west of Hillsboro. Winds estimated at 60 mph lowered visibilities to near zero causing state police to close Interstate 10 east of Deming. Arroyo flooding led to the closure of Highway 180 northwest of Deming. Finally, as the storms began to exit the southern border of New Mexico, winds blew power poles down in Columbus while wind-driven nickel size hail covered the ground and cracked numerous car windshields.
10/18/2002	Hail	A line of severe thunderstorms, including a low top supercell at the southern end of the line, moved rapidly eastward across southern Dona Ana County. Hailstones from one inch to an inch and a half in diameter fell from the supercell.
3/25/2003	HAZMAT Incident	CALLER STATED THAT A CONTRACTOR DUG INTO A NATURAL GAS PIPELINE (4-INCH) RELEASING NATURAL GAS INTO THE ATMOSPHERE.. 0 UNKNOWN AMOUNT OF NATURAL GAS WAS RELEASED TO ATMOSPHERE.
6/16/2003	Severe Wind	52 knot wind speeds reported
6/16/2003	Severe Wind	57 knot wind speeds reported
6/16/2003	HAZMAT Incident	THE CALLER IS REPORTING A VEHICLE THAT HIT A GAS METER. THE VEHICLE CAUSED THE RELEASE OF MATERIALS. THE DRIVER OF THE VEHICLE DIED AND IT IS UNKNOWN IF THE ACCIDENT OR THE MATERIALS KILLED HIM.. 0 UNKNOWN AMOUNT OF NATURAL GAS WAS RELEASED TO ATMOSPHERE.
6/27/2003	Hail	0.75 inch hail event
7/6/2003	Severe Wind	A severe thunderstorm produced downburst winds of 63 mph at WSMR C-Station, then $1000 in hail damage at Launch Complex 50.
9/9/2003	Severe Wind	50 knot wind speeds reported
10/3/2003	Severe Wind	51 knot wind speeds reported
11/7/2003	HAZMAT Incident	CALLER STATED THAT RESPONSIBLE PARTY HAS AN INADEQUATE SEWAGE SYSTEM, RESULTING IN A RELEASE OF SEWAGE ONTO THE GROUND AND ONTO THE LOCAL ROADS.. 0 UNKNOWN AMOUNT OF RAW SEWAGE WAS RELEASED TO STORM DRAIN>UNKNOWN.
4/3/2004	Hail	A supercell thunderstorm formed just north of northeast El Paso and tracked northward across Chaparral and along the east slopes of the Organ Mountains. Along the way it dropped a large amount of golf ball size hail (with a few hailstones reaching hens egg size) on the town of Chaparral, resulting in extensive damage to mobile home skirting, windows and a few roofs. The hail was driven by 60 mph wind gusts. The hail depth was measured at 13 inches, and hailstones were still 1.25 inches in diameter more than 4 hours after the event.
4/3/2004	Hail	A supercell thunderstorm formed just north of northeast El Paso and tracked northward across Chaparral and along the east slopes of the Organ Mountains. Along the way it dropped a large amount of golf ball size hail (with a few hailstones reaching hens egg size) on the town of Chaparral, resulting in extensive damage to mobile home skirting, windows and a few roofs. The hail was driven by 60 mph wind gusts. The hail depth was measured at 13 inches, and hailstones were still 1.25 inches in diameter more than 4 hours after the event.
5/15/2004	Hail	
6/3/2004	Severe Wind	A merger of two severe thunderstorms resulted in a right-moving supercell affecting an area mainly west and north of Las Cruces, producing damaging winds and hail as large as golf balls. Hardest hit was the Las Cruces Airport, where a wind gust was measured at 62 mph and a tower was knocked down. Golf ball size hail caused extensive damage to some of the aircraft, especially helicopters owned by Southwest Air Ambulance. There was damage to the runway lighting system, and Southwest Aviation had roof damage. Numerous windows and windshields were shattered at a nearby prison facility. Prior to the merger, the northern cell dropped 3 inches of rain near Radium Springs, but only minor flooding occurred.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
8/8/2002	Flood	LAS CRUCES	0	0	$30,000	$0	$30,000	NCDC, 2011
8/10/2002	Severe Wind	GARFIELD	0	0	$10,000	$0	$10,000	NCDC, 2011
10/18/2002	Hail	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
3/25/2003	HAZMAT Incident	INTERSECTION OF SEAPINES AND MCNUTT			$0	$0	$0	NRC, 2011; #640516
6/16/2003	Severe Wind	WHITE SANDS	0	0	$0	$0	$0	NCDC, 2011
6/16/2003	Severe Wind	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
6/16/2003	HAZMAT Incident	HIGHWAY 187	1		$0	$0	$0	NRC, 2011; #648102
6/27/2003	Hail	RADIUM SPGS	0	0	$0	$0	$0	NCDC, 2011
7/6/2003	Severe Wind	WHITE SANDS	0	0	$0	$0	$0	NCDC, 2011
9/9/2003	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
10/3/2003	Severe Wind	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
11/7/2003	HAZMAT Incident	BENNETT'S TRAILER COURT			$0	$0	$0	NRC, 2011; #704756
4/3/2004	Hail	ANTHONY	0	0	$2,000,000	$0	$2,000,000	NCDC, 2011
4/3/2004	Hail	ORGAN	0	0	$0	$0	$0	NCDC, 2011
5/15/2004	Hail	ANTHONY	0	0	$0	$0	$0	NCDC, 2011
6/3/2004	Severe Wind	LAS CRUCES ARPT	0	0	$10,000	$0	$10,000	NCDC, 2011

Date	Hazard	Description
6/3/2004	Hail	A merger of two severe thunderstorms resulted in a right-moving supercell affecting an area mainly west and north of Las Cruces, producing damaging winds and hail as large as golf balls. Hardest hit was the Las Cruces Airport, where a wind gust was measured at 62 mph and a tower was knocked down. Golf ball size hail caused extensive damage to some of the aircraft, especially helicopters owned by Southwest Air Ambulance. There was damage to the runway lighting system, and Southwest Aviation had roof damage. Numerous windows and windshields were shattered at a nearby prison facility. Prior to the merger, the northern cell dropped 3 inches of rain near Radium Springs, but only minor flooding occurred.
6/26/2004	Severe Wind	57 knot wind speeds reported
6/29/2004	Flood	Thunderstorms repeatedly moved over southern and central Dona Ana County, dropping more than 3 inches of rain between Las Cruces and northeast El Paso. Though most areas experienced nuisance flooding, the town of Vado, which lies in a somewhat sunken basin, received the run-off from most of the surrounding area. As a result, 14 houses had to be evacuated. Most of the town was under 2 to 3 feet of water, with a few spots under 6 feet. Governor Richardson later declared Vado a disaster area.
7/11/2004	HAZMAT Incident	TAKEN FROM WEB REPORT / A TANKER TRUCK LOST CONTROL AND ROLLED OVER ON I-10, NEAR ANTHONY, NEW MEXICO, RESULTING IN A SPILL OF APPROXIMATELY 2,500 GALLONS OF DIESEL FUEL ONTO THE ROAD. THE INCIDENT TOOK PLACE SHORTLY ATER 6 PM ON 11 JULY 2004. THE INTER. 2500 BARREL(S) OF OIL, FUEL: NO. 2-D WAS RELEASED TO ROADWAY.
8/13/2004	Hail	A cluster of thunderstorms moved southward into the Las Cruces area, producing nickel size hail and 3 to 5 inches of rain. Flooding was reported throughout Las Cruces, with extensive flooding in the Mesilla Park section.
8/13/2004	Flood	A cluster of thunderstorms moved southward into the Las Cruces area, producing nickel size hail and 3 to 5 inches of rain. Flooding was reported throughout Las Cruces, with extensive flooding in the Mesilla Park section.
8/29/2004	Hail	1 inch hail event
9/29/2004	Hail	1.25 inch hail event
9/29/2004	Hail	1 inch hail event
9/29/2004	Flood	
9/29/2004	Hail	0.75 inch hail event
9/29/2004	Severe Wind	57 knot wind speeds reported
10/1/2004	HAZMAT Incident	CALLER STATED THAT COMPANY IS STRIPPING POWDER COATED MATERIAL OFF OF METALS AND IS WASHING TOXIC MATERIAL FROM IT ONTO THE GROUND. THERE ARE SEVERAL 5 GALLON CONTAINERS WITH OIL IN THEM THAT ARE RELEASING ONTO THE GROUND WHEN IT RAINS.. 0 UNKNOWN AMOUNT OF TOXIC MATERIAL WAS RELEASED TO .
10/5/2004	Hail	1 inch hail event
10/30/2004	HAZMAT Incident	REPORTING A MATERIAL RELEASED FROM A GAS METER SET DUE TO A MOTORCYCLE ACCIDENT.. 100 CUBIC FEET OF NATURAL GAS WAS RELEASED TO ATMOSPHERE.
12/27/2004	HAZMAT Incident	CALLER STATED THE OWNER OF A COMPANY IS DUMPING UNKNOWN TOXIC CHEMICALS ONTO THE GROUND. 0 UNKNOWN AMOUNT OF UNKNOWN MATERIAL WAS RELEASED TO .
2/23/2005	Hail	0.75 inch hail event
4/13/2005	HAZMAT Incident	CALLER STATED THAT A TRUCK DUMPED UNKNOWN LIQUIDS ONTO THE GROUND DUE TO UNKNOWN CAUSES.. 0 UNKNOWN AMOUNT OF UNKNOWN MATERIAL WAS RELEASED TO GROUND.
6/24/2005	HAZMAT Incident	THE CALLER STATED THAT WHILE INVESTIGATING A DEFECT ON A PIPELINE, THE COATING WAS BEING REMOVED FROM THE PIPELINE WHEN THE DEFECT FAILED RELEASING NATURAL GAS.. 11000 MIL CBF OF NATURAL GAS WAS RELEASED TO AIR.
7/5/2005	HAZMAT Incident	INCIDENT MOUNTAIN STANDARD TIME / CALLER REPORTING A VEHICLE ROLLOVER CAUSING AN INJURY AND A RELEASE OF NATURAL GAS FROM A RISER STRUCK BY THE VEHICLE. 0 UNKNOWN AMOUNT OF NATURAL GAS WAS RELEASED TO .
7/30/2005	Flood	Major street flooding occurred from north of Anthony NM into northwestern El Paso County. Numerous stalled cars were observed from Interstate 10.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
6/3/2004	Hail	LAS CRUCES ARPT	0	0	$1,200,000	$0	$1,200,000	NCDC, 2011
6/26/2004	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
6/29/2004	Flood	VADO	0	0	$500,000	$0	$500,000	NCDC, 2011
7/11/2004	HAZMAT Incident	I-10			$0	$0	$0	NRC, 2011; #728009
8/13/2004	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
8/13/2004	Flood	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
8/29/2004	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
9/29/2004	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
9/29/2004	Hail	VADO	0	0	$0	$0	$0	NCDC, 2011
9/29/2004	Flood	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
9/29/2004	Hail	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
9/29/2004	Severe Wind	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
10/1/2004	HAZMAT Incident				$0	$0	$0	NRC, 2011; #744131
10/5/2004	Hail	ORGAN	0	0	$0	$0	$0	NCDC, 2011
10/30/2004	HAZMAT Incident			1	$0	$0	$0	NRC, 2011; #740366
12/27/2004	HAZMAT Incident	IN THE BACK OF THIS ADDRESS			$0	$0	$0	NRC, 2011; #745663
2/23/2005	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
4/13/2005	HAZMAT Incident	ON THE SIDE OF THIS ADDRESS			$0	$0	$0	NRC, 2011; #755627
6/24/2005	HAZMAT Incident	EL PASO 1100 PIPELINE / PIPELINE MILE POST 243.15			$0	$0	$0	NRC, 2011; #763290
7/5/2005	HAZMAT Incident			1	$0	$0	$0	NRC, 2011; #764391
7/30/2005	Flood	ANTHONY	0	0	$0	$0	$0	NCDC, 2011

Date	Hazard	Description
8/28/2005	Severe Wind	A fast moving thunderstorm produced winds estimated at 60 to 70 mph as it moved through Las Cruces and down to the TX state line. Numerous power poles and trees were knocked down in Las Cruces. Trees were also reported down in Chamberino. Brief heavy rain also caused street flooding in Las Cruces.
8/28/2005	Severe Wind	A fast moving thunderstorm produced winds estimated at 60 to 70 mph as it moved through Las Cruces and down to the TX state line. Numerous power poles and trees were knocked down in Las Cruces. Trees were also reported down in Chamberino. Brief heavy rain also caused street flooding in Las Cruces.
9/6/2005	Flood	Major flooding occurred across most of the Las Cruces area as a thunderstorm complex dropped heavy rain during a 3 hour time frame. Rainfall reports were widespread 2 to 3 inches with isolated amounts around 4 inches. All major roads were flooded with a few intersections under 4 feet of water. Sandbags were put up until resources were exhausted. The rainfall amounts were not extremely unusual, just the areal coverage.
11/29/2005	HAZMAT Incident	CALLER STATED THERE WAS A RELEASE OF MATERIALS FROM A TRUCK ONTO THE GROUND BY A TRUCK REPAIR SHOP. CALLER STATED THE MATERIALS WENT ONTO THE GROUND AND THEN INTO A DRAINAGE DITCH.. 0 UNKNOWN AMOUNT OF OIL, MISC: MOTOR WAS RELEASED TO DRAINAGE DITCH.
3/5/2006	Drought	SANTA FE-Governor Bill Richardson today declared a state of drought in New Mexico, ordering state agencies to implement water-saving strategies and prepare to assist in drought relief efforts across the state. The declaration shall remain in place until such time as the governor rescinds it.
5/14/2006	Hail	Penny to nickel size hail fell for at least 15 minutes east of Las Cruces, NM.
7/6/2006	Flood	Up to 2 inches of rain fell within an hour resulting in major street flooding and street closures in Sunland Park, Chaparral and Anthony NM.
7/6/2006	Flood	Heavy rains northwest of town caused the Placitas Arroyo to run out of its banks, with flood waters reaching Hatch. Water was high enough to spill over the Placita Arroyo bridges.
7/7/2006	Flood	Arroyos were running out of banks, with water 1 foot deep on streets 5.5 miles northeast of Las Cruces.
7/8/2006	HAZMAT Incident	CALLER REPORTING OIL SPILLED ON THE GROUND OF THE PROPERTY DUE TO CONSTRUCTION OPERATIONS.. 0 UNKNOWN AMOUNT OF UNKNOWN OIL WAS RELEASED TO .
7/14/2006	Severe Wind	A severe thunderstorm produced wind gusts of 60 mph or more as it moved west from White Sands Missile Range Headquarters to just northeast of Las Cruces. A mesonet site measured a wind gust of 72 mph at WSMR HQ.
8/1/2006	Flood	A cluster of slow moving thunderstorms dropped 1.5 to 3 inches of rain over the southern portion of Dona Ana County, especially near the Rio Grande. Even higher amounts fell over the nearby Franklin Mountains which added to severe runoff problems. Interstate 10 south of Las Cruces was closed for several hours. Hardest hit with damage to roads and structures was Sunland Park, followed by Anthony, Chaparral and La Union. About 1200 residents in Sunland Park were forced to evacuate as the Rio Grande River reached a stage of 9.3 feet, the highest in 50 years. This was one of many flood events during the summer that led to much of New Mexico being declared a federal disaster area.
8/3/2006	Flood	A line of rapidly moving thunderstorms dropped up to an inch and a half of rain in less than 30 minutes during the early morning hours. This was only 36 hours after the extensive flash flooding on August 1st, so runoff was excessive. Roads were impassable in Chaparral, and erosion exposed gas pipes in Vado and Sunland Park.
8/4/2006	Flood	Flash flooding occurred in an area which included Organ, Dona Ana and the east mesa of Las Cruces. Roads were covered by up to 2 feet of water with some closures. Water also flooded backyards and entered homes as retention walls collapsed from water swollen arroyos.
8/13/2006	Lightning	Lightning strike damaged equipment at NMSU
8/15/2006	Flood	Runoff from heavy rains over the nearby Sierra De Las Uvas Mountains caused the Placitas Arroyo to breach, which sent a wall of water into the town of Hatch. Up to 4 feet of water entered business and residences. Mandatory evacuations of several hundred residents took place, including 150 people from an apartment complex which eventually had to be condemned. All roads into and within Hatch were closed.
8/16/2006	Severe Wind	A Skywarn Spotter estimated wind gusts of 70 mph and flooding of roads on the mesa southwest of Las Cruces.
8/21/2006	Flood	Heavy rain in the area caused a breach in the Placitas Arroyo near Hatch. Most of the water flowed north of the town, but about 8 residences were evacuated as a precaution. Highway 187 was covered with water. Most of the damage was to crops.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
8/28/2005	Severe Wind	LAS CRUCES, CHAMBERINO	0	0	$20,000	$0	$20,000	NCDC, 2011
8/28/2005	Severe Wind	CHAMBERINO	0	0	$0	$0	$0	NCDC, 2011
9/6/2005	Flood	LAS CRUCES	0	0	$1,000,000	$0	$1,000,000	NCDC, 2011
11/29/2005	HAZMAT Incident				$0	$0	$0	NRC, 2011; #780948
3/5/2006	Drought	Statewide	0	0	$0	$0	$0	ENMRD, 2011
5/14/2006	Hail	ORGAN	0	0	$0	$0	$0	NCDC, 2011
7/6/2006	Flood	Sunland Park, Chaparral, Anthony	0	0	$0	$0	$0	NCDC, 2011
7/6/2006	Flood	HATCH	0	0	$0	$0	$0	NCDC, 2011
7/7/2006	Flood	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
7/8/2006	HAZMAT Incident				$0	$0	$0	NRC, 2011; #804929
7/14/2006	Severe Wind	WHITE SANDS, ORGAN	0	0	$0	$0	$0	NCDC, 2011
8/1/2006	Flood	DONA ANA COUNTY - SOUTH PORTION	0	0	$3,000,000	$50,000	$3,050,000	NCDC, 2011
8/3/2006	Flood	DONA ANA COUNTY - SOUTH PORTION	0	0	$20,000	$0	$20,000	NCDC, 2011
8/4/2006	Flood	DONA ANA COUNTY - NORTH CENTRAL PORTION	0	0	$50,000	$0	$50,000	NCDC, 2011
8/13/2006	Lightning	NMSU	0	0	$1,417	$0	$1,417	NMSU, 2012
8/15/2006	Flood	HATCH	0	0	$4,000,000	$500,000	$4,500,000	NCDC, 2011
8/16/2006	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
8/21/2006	Flood	HATCH	0	0	$0	$50,000	$50,000	NCDC, 2011

Date	Hazard	Description
8/28/2006	Flood	A large cluster of thunderstorms dropped 3 to 5 inches of rain on much of the triangle between Las Cruces, Hatch and Deming, which is an unusually large area for such rainfall amounts in the desert southwest. The Placitas Arroyo near Hatch breached for the third time in 3 weeks, flooding mainly farm land. A flood wave resulted in minor flooding of the Rio Grande River downstream into the El Paso area, the third time this month. Before August 1st, the previous time was August 1999. On the north side of the Sierra De La Uvas Mountains, a huge amount of runoff flooded the desert and led to the closure of Interstate 10 between Deming and Las Cruces for several hours. Closing the interstate along this stretch is not uncommon during dust storms, but extremely rare for flooding. The flooding also did damage to structures in this sparsely populated area.
8/29/2006	Flood	A large cluster of thunderstorms dropped 3 to 5 inches of rain on much of the triangle between Las Cruces, Hatch and Deming, which is an unusually large area for such rainfall amounts in the desert southwest. The Placitas Arroyo near Hatch breached for the third time in 3 weeks, flooding mainly farm land. A flood wave resulted in minor flooding of the Rio Grande River downstream into the El Paso area, the third time this month. Before August 1st, the previous time was August 1999. On the north side of the Sierra De La Uvas Mountains, a huge amount of runoff flooded the desert and led to the closure of Interstate 10 between Deming and Las Cruces for several hours. Closing the interstate along this stretch is not uncommon during dust storms, but extremely rare for flooding. The flooding also did damage to structures in this sparsely populated area.
9/1/2006	Flood	Highway 185 was closed in Placitas (just west of Hatch) due to flooding.
9/1/2006	Flood	Excessive runoff overwhelmed a drain pipe which resulted in a mudslide in Sunland Park. Several homes were flooded, with a storage shed and part of a driveway washed away at one residence.
9/2/2006	Flood	Several roads were flooded with a number of them closed in Las Cruces.
9/3/2006	Flood	Persistent moderate to heavy rainfall on already saturated ground led to flooding across much of south central New Mexico. Dozens of roads were closed across Dona Ana County and Sierra County.
9/4/2006	Flood	Four days of moderate to heavy rainfall due to tropical moisture influx from Hurricane John (which was moving up the Baja Peninsula) led to widespread flooding across much of southern New Mexico. Many roads were flooded in the area with law enforcement agencies reporting numerous closures. A drainage system in Sunland Park once again failed which resulted in homes being flooded.
9/13/2006	Hail	A heavy precipitation supercell thunderstorm tracked from far eastern Luna County eastward along Interstate 10 through Las Cruces. This storm dropped golf ball size hail throughout most of its lifetime, resulting in a 4 car collision on Interstate 10 in far eastern Luna County, and hundreds of damaged roofs and automobiles and destroyed skylights in Mesilla and south Las Cruces. The US Border Patrol Checkpoint was evacuated. Wind damage from a possible tornado occurred at the state fairgrounds west of Las Cruces (mainly to outbuildings and trees), while a tornado was sighted briefly just west of Mesilla. This was the costliest hail storm in the history of the NWS El Paso county warning area, totaling more than $10 million in damage from large hail driven by strong winds. Finally, 2 inches of rain within 30 minutes caused flash flooding in Picacho Hills (far west Las Cruces) and forced the closure of I-10 in western Dona Ana County.
9/13/2006	Severe Wind	A Las Cruces City Police officer sighted an F0 tornado which briefly touched down west of Mesilla. It was in an area with no structures.A heavy precipitation supercell thunderstorm tracked from far eastern Luna County eastward along Interstate 10 through Las Cruces. This storm dropped golf ball size hail throughout most of its lifetime, resulting in a 4 car collision on Interstate 10 in far eastern Luna County, and hundreds of damaged roofs and automobiles and destroyed skylights in Mesilla and south Las Cruces. The US Border Patrol Checkpoint was evacuated. Wind damage from a possible tornado occurred at the state fairgrounds west of Las Cruces (mainly to outbuildings and trees), while a tornado was sighted briefly just west of Mesilla. This was the costliest hail storm in the history of the NWS El Paso county warning area, totaling more than $10 million in damage from large hail driven by strong winds. Finally, 2 inches of rain within 30 minutes caused flash flooding in Picacho Hills (far west Las Cruces) and forced the closure of I-10 in western Dona Ana County.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
8/28/2006	Flood	DONA ANA COUNTY - NORTHWEST PORTION	0	0	$50,000	$100,000	$150,000	NCDC, 2011
8/29/2006	Flood	COUNTYWIDE	0	0	$20,000	$0	$20,000	NCDC, 2011
9/1/2006	Flood	PLACITAS	0	0	$0	$0	$0	NCDC, 2011
9/1/2006	Flood	SUNLAND PARK	0	0	$20,000	$0	$20,000	NCDC, 2011
9/2/2006	Flood	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
9/3/2006	Flood	COUNTYWIDE	0	0	$0	$0	$0	NCDC, 2011
9/4/2006	Flood	COUNTYWIDE	0	0	$50,000	$0	$50,000	NCDC, 2011
9/13/2006	Hail	LAS CRUCES	0	0	$10,000,000	$500,000	$10,500,000	NCDC, 2011
9/13/2006	Severe Wind	LAS CRUCES, MESILLA	0	0	$0	$0	$0	NCDC, 2011

Date	Hazard	Description
9/13/2006	Flood	The same heavy precipitation supercell that brought extensive hail damage and a small tornado to the Las Cruces area also dumped more than 2 inches of rain within 30 minutes on the far west section of the city. Catchment basins breached which flooded the Picacho Hills subdivision. Sandbags were requested for Mesilla. Further west, Interstate 10 was closed for 2 hours between Las Cruces and Deming, initially because of a tornado threat, but extended when water flooded the lanes 4 miles east of the US Border Patrol checkpoint.
9/13/2006	Severe Wind	NMSU reported a damage to several buildings and an airplane due to severe wind and hail
10/9/2006	Hail	EVENT NARRATIVE: The fourth and final supercell of the outbreak brought nickel to quarter size hail that piled more than 6 inches high in the southern part of the city. Patches of hail were still visible the next afternoon. EPISODE NARRATIVE: A strong upper trough in the westerlies moved into southern NM and far west TX on October 9th and produced an atmospheric profile with sufficient vertical wind shear and low/mid level moisture for severe weather. Several severe cells including at least 4 supercells developed over the area, most of them in southern NM. One supercell tracked from near Animas in Hidalgo County into the Sacramento Mountains northeast of Alamogordo (Otero County), a distance of more than 200 miles.
1/19/2007	Heavy Snow	EVENT NARRATIVE: Five inches of snow fell in in Hillsboro. EPISODE NARRATIVE: A deep upper low moved from southern California eastward across the desert southwest, with southerly flow tapping abundant subtropical moisture in advance of the system. Cold low level flow did not push southward into southern NM and far west TX as strongly as anticipated, so an area wide heavy snow and ice storm episode did not materialize. However, some northern locations did receive substantial amounts of snow, while the majority of the area experienced heavy rain. Significant ice was limited to northeastern Hudspeth County.
1/23/2007	Heavy Snow	EVENT NARRATIVE: Eleven inches of snow fell at Queen, NM. EPISODE NARRATIVE: Another record breaking snow event for west Texas and southeastern New Mexico as an upper level storm system and a cold front move across the region. Six to eight inches of snow in the Van Horn area resulted in Interstate 10 being closed between Fort Hancock and Fort Stockton and Interstate 20 being closed between Pecos and Fort Hancock. At least 200 tractor trailers were stranded in Van Horn and Pecos when those interstates closed. Schools across west Texas and southeastern New Mexico closed for at least a day. Locations across the region received anywhere from an inch to eleven inches of snow.
3/23/2007	Hail	Hail caused damage to NMSU's Agricultural Science Center
3/23/2007	HAZMAT Incident	A TRACTOR TRAILER TRUCK CARRYING SEVERAL 50 POUND BAGS OF PESTICIDE HAS OVERTURNED ON INTERSTATE 1-10. SOME OF THE BAGS HAVE SPILLED INSIDE OF THE TRAILER. THE AREA HAS BEEN ISOLATED UNTIL THE TRAILER IS SECURED. NO MATERIAL HAS SPILLED OUTSIDE OF THE TRA. 0 UNKNOWN AMOUNT OF PESTICIDE (SUPER TIN FUNGACIDE) WAS RELEASED TO INSIDE OF A TRACTOR TRAILER
4/26/2007	HAZMAT Incident	//////WEB REPORT////// VARIOUS TYPES OF OIL AND ACCELERANTS, POSSIBLE DIESEL COVERED MUCH OF THE GROUND NEAR THE FRONT/SOUTH EAST FLOOR OUTSIDE THE FACILITY. I WENT THERE TO SEE IF THE BUSINESS HAD A PARTICULAR PART FOR A MUFFLER THAT I WAS WORKING ON.. 0 UNKNOWN AMOUNT OF UNKNOWN OIL WAS RELEASED TO .
4/29/2007	Severe Wind	An F0 funnel cloud briefly touched down north of Interstate 10 near mile marker 112.
5/2/2007	Hail	An upper low moved from southern AZ across southern NM and far west TX over an air mass that was rather moist for early May in this area. The air mass was very unstable, such that any ground based circulation (e.g. gustnadoes) would quickly spin up within strong updrafts. One technician near White Sands missile Range HQ observed a gustnado along a gust front from a storm farther west grow rapidly upward under a strong thunderstorm. Once the landspout had formed, it moved slowly northeast but persisted for more than 40 minutes (52 minutes according to NSSL). It remained over unpopulated desert terrain and thus no damage occurred. The tornado lasted far longer than one would expect for a landspout. It was concluded that since it connected with a cell that had supercellular tendencies, this accounted for the longevity. Due to the somewhat high thunderstorm base and little precipitation around the funnel, the tornado was easily viewed by El Paso residents up to 30 miles away. Several other severe cells developed that afternoon, with another weak tornado briefly touching down about 25 miles to the northeast.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
9/13/2006	Flood	Las Cruces, Mesilla, Picacho	0	0	$10,000	$0	$10,000	NCDC, 2011
9/13/2006	Severe Wind	NMSU	0	0	$367,018	$0	$367,018	NMSU, 2012
10/9/2006	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
1/19/2007	Heavy Snow		0	0	$0	$0	$0	NCDC, 2011
1/23/2007	Heavy Snow		0	0	$0	$0	$0	NCDC, 2011
3/23/2007	Hail	NMSU	0	0	$51,629	$0	$51,629	NMSU, 2012
3/23/2007	HAZMAT Incident	I-10 212 MILE MARKER WEST BOUND			$0	$0	$0	NRC, 2011; #830148
4/26/2007	HAZMAT Incident	IT'S A LIGHT COLORED METAL BUILDING SURROUNDED BY JUNKED CARS AND HEAVY EQUIPMEN			$0	$0	$0	NRC, 2011; #834947
4/29/2007	Severe Wind	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
5/2/2007	Hail	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011

Date	Hazard	Description
5/2/2007	Severe Wind	Unusually long lasting and large F0 landspout developed under a supercell. It remained over open terrain, so no damage or injuries resulted. EPISODE NARRATIVE: An upper low moved from southern AZ across southern NM and far west TX over an air mass that was rather moist for early May in this area. The air mass was very unstable, such that any ground based circulation (e.g. gustnadoes) would quickly spin up within strong updrafts. One technician near White Sands missile Range HQ observed a gustnado along a gust front from a storm farther west grow rapidly upward under a strong thunderstorm. Once the landspout had formed, it moved slowly northeast but persisted for more than 40 minutes (52 minutes according to NSSL). It remained over unpopulated desert terrain and thus no damage occurred. The tornado lasted far longer than one would expect for a landspout. It was concluded that since it connected with a cell that had supercellular tendencies, this accounted for the longevity. Due to the somewhat high thunderstorm base and little precipitation around the funnel, the tornado was easily viewed by El Paso residents up to 30 miles away. Several other severe cells developed that afternoon, with another weak tornado briefly touching down about
5/8/2007	Flood	EVENT NARRATIVE: An apartment complex in Hatch was flooded, requiring the local fire department to pump water out of the apartments. EPISODE NARRATIVE: A slow moving line of strong thunderstorms dumped heavy rain on northwestern Dona Ana County.
5/25/2007	Hail	EPISODE NARRATIVE: A moist southeast flow imported low level moisture while an upper disturbance moved in from the north, triggering numerous severe thunderstorms over the southwest portion of New Mexico.
6/20/2007	Hail	EVENT NARRATIVE: Nickel size hail fell south of Radium Springs. EPISODE NARRATIVE: Moist southeast flow at the lower levels pushed westward into far west Texas and southern New Mexico under a late season southwest flow aloft. The resulting veering shear profile was favorable for severe thunderstorms, more so in the Texas portion.
7/12/2007	Flood	EVENT NARRATIVE: Up to 30 homes were flooded in Anthony. Sandbags were requested for this area as well as nearby Mesquite (just to the north). EPISODE NARRATIVE: Slow moving thunderstorms within a very moist air mass resulted in very heavy rains.
9/28/2007	Flood	EVENT NARRATIVE: Major street flooding occurred in Sunland Park. EPISODE NARRATIVE: The same high precipitation supercell that caused much damage in El Paso, TX brought flooding to Sunland Park, NM (before entering El Paso). A multicell severe storm formed later and dropped large hail on Orogrande, NM.
12/1/2007	Severe Wind	EPISODE NARRATIVE: An upper level low and associated strong subtropical jet brought heavy rain, high elevation snow, severe thunderstorms and high winds to western and central New Mexico during the predawn hours of December 1st. Flooding was observed in the Gila region while severe thunderstorms produced wind damage in the Rio Grande and Estancia Valleys. Strong winds blew across much of the high terrain and just east of the central mountain chain but were the strongest during the daylight hours of the 1st. The winds were occasionally accompanied by snow, which created near blizzard conditions in the higher mountainous terrain. As the trough opened up and moved east across New Mexico and Colorado, snow levels lowered overnight across the northwest. However, the most significant snow accumulations were confined to elevations above 8500 feet in the Chuska, Southern San Juan and Sangre De Cristo Mountains of northern New Mexico. Through dawn of the 2nd, storm total snow accumulations of 5 to 10 inches were common with 1 to 2 feet likely on west facing slopes above 9500 feet.
2/4/2008	Severe Wind	Severe winds blew off an awning at NMSU
2/28/2008	Wildfire	Kanuck Fire - a human caused fire burned an area 8 miles west of Las Cruces, on Fort Bliss, New Mexico. The fire started February 28, 2008 and was controlled by March 7, 2008, burning a total of 450 acres.
3/14/2008	Severe Wind	EPISODE NARRATIVE: Very strong westerly winds aloft were mixed down to the surface. In addition, a surface pressure gradient tightened due to a deepening surface low in the southern plains. This resulted in strong surface winds across southern New Mexico.
3/18/2008	Wildfire	River Fire - a human caused fire that burned an area 7 miles SW of Hatch, New Mexico. The fire started March 18, 2008 and was controlled by March 27, 2008, burning a total 1,050 acres. One home was destroyed and two were damaged.
4/24/2008	HAZMAT Incident	ANHYDROUS AMMONIA HAS RELEASED TO THE ATMOSPHERE FROM A FAILED REFRIGERATION SYSTEM.. 361 POUND(S) OF AMMONIA, ANHYDROUS WAS RELEASED TO ATMOSPHERE.
5/8/2008	HAZMAT Incident	CALLER IS REPORTING A NATURAL GAS RELEASE FROM A METER RISER TO THE AIR WHEN A CAR HIT IT.. 0 UNKNOWN AMOUNT OF NATURAL GAS WAS RELEASED TO ATMOSPHERE.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
5/2/2007	Severe Wind	CONDRON ARPT	0	0	$0	$0	$0	NCDC, 2011
5/8/2007	Flood	HATCH	0	0	$25,000	$0	$25,000	NCDC, 2011
5/25/2007	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
6/20/2007	Hail	RADIUM SPGS	0	0	$0	$0	$0	NCDC, 2011
7/12/2007	Flood	ANTHONY	0	0	$20,000	$5,000	$25,000	NCDC, 2011
9/28/2007	Flood	SUNLAND PARK	0	0	$0	$0	$0	NCDC, 2011
12/1/2007	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
2/4/2008	Severe Wind	NMSU	0	0	$1,954	$0	$1,954	NMSU, 2012
2/28/2008	Wildfire				$0	$0	$0	National Wildland Coordination Group, 2011
3/14/2008	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
3/18/2008	Wildfire				$0	$0	$0	National Wildland Coordination Group, 2011
4/24/2008	HAZMAT Incident				$0	$0	$0	NRC, 2011; #868909
5/8/2008	HAZMAT Incident			1	$0	$0	$0	NRC, 2011; #870282

Date	Hazard	Description
6/14/2008	Wildfire	Dripping Springs Fire - a human caused fire that burned an area east of Las Cruces, New Mexico at Dripping Springs. The fire started June 14, 2008 and was contained June 19, 2008, burning a total of 1,735 acres. Fire suppression costs were estimated at over $525,000. One outbuilding was damaged.
6/21/2008	Severe Wind	EPISODE NARRATIVE: A back door cold front along with an upper impulse within northerly flow aloft triggered severe thunderstorms with large hail on June 20th. On the 21st, the front was still present but under increasing heights. The resulting warming trend increased dew point depressions and raised the microburst threat.
6/24/2008	Severe Wind	EPISODE NARRATIVE: Low level northeast flow maintained enough moisture for thunderstorm development, while dewpoint depressions were sufficiently large for strong microburst winds and outflows.
7/2/2008	Hail	EPISODE NARRATIVE: An upper impulse within a north to northeast flow moved through a moist, unstable air mass and triggered severe thunderstorms.
7/8/2008	Flood	EVENT NARRATIVE: A Skywarn Spotter reported 3 inches of rain within an hour in Chaparral, and the surrounding neighborhood was flooded. EPISODE NARRATIVE: A weak steering flow within a very moist and unstable air mass resulted in a slow moving thunderstorms in southern New Mexico which dumped very heavy rain.
7/10/2008	Flood	EVENT NARRATIVE: A large cluster of thunderstorms moved over an area already saturated from heavy rain the previous day. Arroyos overflowed and low water crossings were flooded. Highways that were closed included Highway 9 between Columbus and Hachita, Highway 26 between Deming and Hatch, and Highway 27 south of Hillsboro. EPISODE NARRATIVE: A weak steering flow within a very moist and unstable air mass resulted in a slow moving thunderstorms in southern New Mexico which dumped very heavy rain.
7/18/2008	Lightning	Lightning strike damaged the fire panel at the NMSU Observatory
7/26/2008	Flood	EVENT NARRATIVE: The remnants of Dolly brought 2.5 to 3.5 inches of rain to southern Dona Ana County. Water was knee deep in Chaparral, and Highway 28 was flooded south of La Union. EPISODE NARRATIVE: The remnants of Hurricane Dolly moved northwestward into far west Texas, moving directly over west El Paso, then curved north and northeastward into Otero County New Mexico. Moisture from this system spread over most of southern New Mexico and lingered another 36 hours. Storm totals from early the 26th into the 27th peaked at more than 4 inches in the Santa Teresa Country Club area.
7/26/2008	Flood	EVENT NARRATIVE: Residual moisture from the remnants of Dolly led to heavy rainfall and flash flooding in the town of Dona Ana. Several roads were barricaded and water entered numerous homes. EPISODE NARRATIVE: The remnants of Hurricane Dolly moved northwestward into far west Texas, moving directly over west El Paso, then curved north and northeastward into Otero County New Mexico. Moisture from this system spread over most of southern New Mexico and lingered another 36 hours. Storm totals from early the 26th into the 27th peaked at more than 4 inches in the Santa Teresa Country Club area.
7/31/2008	Severe Wind	EVENT NARRATIVE: A wind gust of 58 mph was measured at the Las Cruces Airport during a severe thunderstorm. However, the winds were estimated at 65 mph near Mayfield High School were several trees were blown over and minor structural damage occurred. EPISODE NARRATIVE: An upper impulse within a northeast flow aloft triggered severe thunderstorms over the area.
8/11/2008	Lightning	Lightning strike damaged fire panels, transformer and fuses
12/14/2008	Severe Wind	EVENT NARRATIVE: A gust of 86 mph was measured near Aguirre Springs State Park on the eastern slopes of the Organ Mountains, resulting in a few shingles blown off a roof. Minor building damage occurred in Las Cruces according to a local TV station. EPISODE NARRATIVE: A large, strong upper level trough approached New Mexico from the west. In response, a deep surface trough developed in the southern plains to the northeast of the area. The tight surface pressure gradient and mixing down of strong winds aloft resulted in high winds at the surface.
12/23/2008	Severe Wind	EVENT NARRATIVE: Wind gusts of 60 to 67 mph were measured at White Sands missile Range Headquarters. A gust of 97 mph was measured near San Augustine Pass. Windows were blown out of vehicles at the WSMR main post. EPISODE NARRATIVE: A strong upper level trough moved eastward across the desert southwest and induced a deep surface low in the Texas panhandle. A tight surface gradient and the mixing down of strong winds aloft resulted in high winds at the surface.
12/23/2008	Severe Wind	Severe winds blew a roof off at NMSU

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
6/14/2008	Wildfire			1	$0	$0	$0	National Wildland Coordination Group, 2011
6/21/2008	Severe Wind	STRAUSS	0	0	$0	$0	$0	NCDC, 2011
6/24/2008	Severe Wind	STRAUSS	0	0	$0	$0	$0	NCDC, 2011
7/2/2008	Hail	VADO, LA UNION	0	0	$0	$0	$0	NCDC, 2011
7/8/2008	Flood	ANTHONY	0	0	$10,000	$10,000	$20,000	NCDC, 2011
7/10/2008	Flood	MALPAIS	0	0	$50,000	$20,000	$70,000	NCDC, 2011
7/18/2008	Lightning	NMSU	0	0	$6,361	$0	$6,361	NMSU, 2012
7/26/2008	Flood	ANTHONY	0	0	$20,000	$0	$20,000	NCDC, 2011
7/26/2008	Flood	DONA ANA	0	0	$75,000	$10,000	$85,000	NCDC, 2011
7/31/2008	Severe Wind	LAS CRUCES	0	0	$50,000	$0	$50,000	NCDC, 2011
8/11/2008	Lightning	NMSU	0	0	$11,891	$0	$11,891	NMSU, 2012
12/14/2008	Severe Wind		0	0	$5,000	$0	$5,000	NCDC, 2011
12/23/2008	Severe Wind		0	0	$10,000	$0	$10,000	NCDC, 2011
12/23/2008	Severe Wind	NMSU	0	0	$18,436	$0	$18,436	NMSU, 2012

Date	Hazard	Description
5/22/2009	Flood	EVENT NARRATIVE: Flooding was reported in some homes in the community of Rodey. There was also flooding along Highway 185 southeast of Hatch. EPISODE NARRATIVE: A late season upper low moved slowly northeastward across Arizona and New Mexico, drawing up plenty of moisture in advance within a deep southerly flow.
6/17/2009	HAZMAT Incident	CALLER IS REPORTING A RELEASE OF NATURAL GAS FROM A GAS METER SET DUE TO IT BEING STRUCK BY A ALL TERRAIN VEHICLE.. 0 UNKNOWN AMOUNT OF NATURAL GAS WAS RELEASED TO ATMOSPHERE.
6/24/2009	Severe Wind	EVENT NARRATIVE: A 62 mph wind gust was measured during a severe thunderstorm at the WSMR golf course. The rainfall total was almost an inch. EPISODE NARRATIVE: High pressure aloft was centered over central Texas, which placed southern New Mexico under a moist southeast flow. It was an early start to the North American monsoon in this part of the country.
6/28/2009	Flood	EVENT NARRATIVE: Baylor Canyon Road and Dripping Springs Road were washed out. EPISODE NARRATIVE: A plume of moist tropical air was streaming northward over New Mexico between an upper high to the east and a Pacific upper trough to the west. In addition, a weak backdoor front was stalled across the area. Disturbances within the southerly flow interacting with the front resulted in thunderstorms that were efficient rain producers.
7/1/2009	HAZMAT Incident	CALLER IS REPORTING A STRONG ODOR (CHEMICAL/WOOD LIKE SMELL) COMING FROM HER SINK DUE TO UNKNOWN CAUSES. CALLER STATED THAT HER HOME IS NEWLY BUILT AND THE DEVELOPERS CAN NOT DETERMINED WHERE AND WHAT THIS SMELL IS. CALLER STATED THIS HAS BEEN GONG ON FO. 0 UNKNOWN AMOUNT OF UNKNOWN MATERIAL WAS RELEASED TO ATMOSPHERE.
7/3/2009	Flood	EVENT NARRATIVE: Arroyos in the Santa Teresa area became full and led to flooding on NM Highway 273. EPISODE NARRATIVE: A very moist southerly flow was in place over the area. The atmospheric moisture content was almost twice the normal value for early July. The flow was such that thunderstorm movement was slow, subjecting locations to very heavy rainfall for long periods of time. Occasional wet microbursts were also observed.
7/6/2009	Flood	Thunderstorm rains caused flooding in building at NMSU
8/1/2009	Severe Wind	EVENT NARRATIVE: A wet microburst produced a wind gust of 68 mph at Santa Teresa High School. At least two trees were blown over. EPISODE NARRATIVE: A cool pocket of air aloft along with a weak back door front provided a moist, unstable air mass over southern New Mexico.
9/11/2009	Hail	EPISODE NARRATIVE: A weak upper disturbance moved slowly southward over southern New Mexico and far west Texas within a moist, unstable air mass. An approaching jet streak from the west along with low level easterly flow provided favorable vertical wind shear and sufficient lift for a severe weather outbreak.
9/11/2009	Hail	EPISODE NARRATIVE: A weak upper disturbance moved slowly southward over southern New Mexico and far west Texas within a moist, unstable air mass. An approaching jet streak from the west along with low level easterly flow provided favorable vertical wind shear and sufficient lift for a severe weather outbreak.
9/11/2009	Flood	EVENT NARRATIVE: Homes were flooded near Peachtree Hill northeast of Las Cruces. The U.S. 70 frontage road in this area was covered by up to 3 feet of water, and all major streets on the east mesa of Las Cruces were under water. EPISODE NARRATIVE: A weak upper disturbance moved slowly southward over southern New Mexico and far west Texas within a moist, unstable air mass. An approaching jet streak from the west along with low level easterly flow provided favorable vertical wind shear and sufficient lift for a severe weather outbreak.
9/19/2009	Hail	EPISODE NARRATIVE: A cool pocket of air associated with a weak trough aloft moved over an area of low level convergence, resulting in a line of severe thunderstorms.
9/19/2009	HAIL	EVENT NARRATIVE: Nickel to quarter size hail feel for 10 minutes, along with an inch of rain in 30 minutes. EPISODE NARRATIVE: A cool pocket of air associated with a weak trough aloft moved over an area of low level convergence, resulting in a line of severe thunderstorms.
9/19/2009	Flood	EVENT NARRATIVE: Heavy rain led to the flooding of yards in Anthony, New Mexico. EPISODE NARRATIVE: A cool pocket of air associated with a weak trough aloft moved over an area of low level convergence, resulting in a line of severe thunderstorms.
10/28/2009	Severe Wind	EVENT NARRATIVE: A gust of 73 mph was measured 2 miles southeast of San Augustin Pass. EPISODE NARRATIVE: An unseasonably cold upper low moved across the southern Rockies producing heavy snow in the Sacramento Mountains. In addition, strong winds aloft mixed down to the surface resulting in wind gusts to greater than 70 mph.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
5/22/2009	Flood	HATCH	0	0	$50,000	$0	$50,000	NCDC, 2011
6/17/2009	HAZMAT Incident	PRIVATE RESIDENCE		2	$0	$0	$0	NRC, 2011; #908873
6/24/2009	Severe Wind	WHITE SANDS	0	0	$0	$0	$0	NCDC, 2011
6/28/2009	Flood	ORGAN	0	0	$10,000	$0	$10,000	NCDC, 2011
7/1/2009	HAZMAT Incident				$0	$0	$0	NRC, 2011; #910319
7/3/2009	Flood	STRAUSS	0	0	$0	$0	$0	NCDC, 2011
7/6/2009	Flood	NMSU	0	0	$2,381	$0	$2,381	NMSU, 2012
8/1/2009	Severe Wind	STRAUSS	0	0	$2,000	$0	$2,000	NCDC, 2011
9/11/2009	Hail	(LRU)LAS CRUCES ARPT	0	0	$0	$0	$0	NCDC, 2011
9/11/2009	Hail	(LRU)LAS CRUCES ARPT	0	0	$0	$0	$0	NCDC, 2011
9/11/2009	Flood	DONA ANA	0	0	$70,000	$0	$70,000	NCDC, 2011
9/19/2009	Hail	LAS CRUCES, FT FILLMORE	0	0	$0	$0	$0	NCDC, 2011
9/19/2009	HAIL	ANTHONY	0	0	$0	$0	$0	NCDC, 2011
9/19/2009	Flood	ANTHONY	0	0	$10,000	$0	$10,000	NCDC, 2011
10/28/2009	Severe Wind		0	0	$0	$0	$0	NCDC, 2011

Date	Hazard	Description
12/8/2009	Severe Wind	EVENT NARRATIVE: Peak wind gust reported was 83 mph at the KE28 AWOS site located 19 miles west-northwest of Holloman Air Force Base. Roof was tore off of the Directorate of Plans Training Mobilization and Security building on the White Sands Missile Range. Two persons were treated for minor injuries from falling debris. Other damage on the White Sands Missile Range included downed power lines, uprooted trees, damage to other buildings, including the police station, broken windows in vehicles and overturned trailers. Roof were also blown off buildings along with downed power lines in the Chaparral area. EPISODE NARRATIVE: An upper low/trough centered over the Colorado Rockies with an associated 150kt jet located over southern New Mexico and far West Texas brought wind gusts over 100 mph to areas along and east of I-25. Considerable damage and power outages were reported in the Sacramento Mountains and east of the Organ Mountains.
12/29/2009	Heavy Snow	EVENT NARRATIVE: A maximum snowfall of 6 inches was reported at San Augustin Pass. Other reports included 3.5 inches 3 miles west southwest of Organ and between 1.5 and 2.5 inches in the Las Cruces area. EPISODE NARRATIVE: A Pacific storm system moved across southwestern New Mexico and into far west Texas with cold air already in place at the surface providing a favorable environment for snow.
1/20/2010	HAZMAT Incident	CALLER STATED THAT A VALVE WAS LEFT OPEN ON A TANK ALLOWING 5000-6000 GALLONS OF VEGETABLE OIL TO LEAK OUT, SOME OF WHICH WENT INTO A DRY DITCH. THE REST IS IN THE YARD AND PARKING LOT OF THE RIO VALLEY BIOFUEL COMPANY.. 6000 GALLON(S) OF OIL, EDIBLE: VEGETABLE WAS RELEASED TO PARKING LOT, YARD, DITCH.
1/23/2010	Severe Wind	Severe winds caused damage to scoreboard at NMSU
3/14/2010	Hail	Hail caused damage to a building and 2 parked vehicles at NMSU
4/1/2010	Severe Wind	EVENT NARRATIVE: A peak wind gust of 76 mph was reported at the White Sands missile Range Post Headquarters. Other reports include a gust to 67 mph at Holloman AFB and a gust to 62 mph reported 5 miles northwest of Orogrande at a Mesonet site. EPISODE NARRATIVE: A strong Pacific trough moving into the desert southwest brought a cold front through the region with wind gusts up to 96 mph.
4/29/2010	Severe Wind	EVENT NARRATIVE: A peak gust of 69 MPH was reported at the Truth or Consequences Airport. In addition, numerous power lines were down across the city. EPISODE NARRATIVE: A deep upper low moving across the Rockies had a 130 knot jet streak moving around the base of it into southern New Mexico. A strong surface low deepened over the Oklahoma panhandle with winds ahead of a strong cold front gusting up to 95 MPH.
6/15/2010	Wildfire	Ft. Bliss 2 Fire - a human caused fire that burned an area south of Soledad Canyon, New Mexico. The fire started June 15, 2010 and was contained June 25, 2010, burning a total of 5,160 acres. Fire suppression costs were estimated at over $900,000.
6/20/2010	Wildfire	Long Canyon Fire - a human caused fire that burned an area 4 miles east of Las Cruces, New Mexico in the Organ Mountains. The fire started June 20, 2010 and was contained June 24, 2010, burning a total of 2,582 acres. Fire suppression costs were estimated at over $850,000.
7/11/2010	Flood	EVENT NARRATIVE: Water was reported going over West Canal Road Bridge in Hatch. In the Rincon/Radium Springs area near Santiago Peak Road and Highway 185 flooding pushed cars off of road. EPISODE NARRATIVE: Deep southerly flow provided a deep layer of monsoon moisture to the region with slow moving storms. The high moisture content and slow storm motion contributed to the heavy rain and flash flooding in Dona Ana County.
7/15/2010	Hail	EVENT NARRATIVE: One inch hail was reported 3 miles northwest of Las Cruces and also 2 miles northeast of Las Cruces. EPISODE NARRATIVE: A moderately moist and unstable environment under an upper ridge provided for a pulse severe storm to develop over Las Cruces, NM.
7/25/2010	Flood	EVENT NARRATIVE: Very heavy rain over Las Cruces flooded many buildings and streets across town. New Mexico State University recorded 3.36 inches of rain. At least 6 buildings on the campus had water damage with several roads closed. Several water rescues from stalled vehicles were performed on campus. EPISODE NARRATIVE: A very moist environment was in place under an upper level ridge. A stationary boundary was draped across southern New Mexico providing the lift for slow moving thunderstorms which caused numerous reports of flash flooding.
7/25/2010	Flood	Flooding caused water damage to buildings at NMSU
8/5/2010	Severe Wind	High winds cause a tree to split in two and the debris fell into two yards causing damages

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
12/8/2009	Severe Wind		0	2	$2,000,000	$0	$2,000,000	NCDC, 2011
12/29/2009	Heavy Snow		0	0	$0	$0	$0	NCDC, 2011
1/20/2010	HAZMAT Incident	RIO VALLEY BIOFUEL IN ANTHONY NEW MEXICO			$0	$0	$0	NRC, 2011; #929121
1/23/2010	Severe Wind	NMSU	0	0	$5,580	$0	$5,580	NMSU, 2012
3/14/2010	Hail	NMSU	0	0	$9,114	$0	$9,114	NMSU, 2012
4/1/2010	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
4/29/2010	Severe Wind		0	0	$15,000	$0	$15,000	NCDC, 2011
6/15/2010	Wildfire				$0	$0	$0	National Wildland Coordination Group, 2011
6/20/2010	Wildfire				$0	$0	$0	National Wildland Coordination Group, 2011
7/11/2010	Flood	GARFIELD	0	0	$25,000	$0	$25,000	NCDC, 2011
7/15/2010	Hail	LAS CRUCES	0	0	$0	$0	$0	NCDC, 2011
7/25/2010	Flood	PICACHO	0	0	$50,000	$0	$50,000	NCDC, 2011
7/25/2010	Flood	NMSU	0	0	$12,086	$0	$12,086	NMSU, 2012
8/5/2010	Severe Wind	NMSU	0	0	$14,459	$0	$14,459	NMSU, 2012

Date	Hazard	Description
8/12/2010	Severe Wind	EVENT NARRATIVE: Wind gusts were estimated up to 65 MPH in northeast Las Cruces. EPISODE NARRATIVE: A weak disturbance moving through west-southwest flow aloft provided lift for thunderstorms over Dona Ana County. Dew points in the 40s at the surface combined with temperatures in the 90s allowed for severe winds to be produced with these storms.
8/24/2010	Flood	EVENT NARRATIVE: Rainfall totals of up to 2.00 inches were reported in Radium Springs with several inches of standing water on streets and low lying areas. EPISODE NARRATIVE: An upper ridge was centered over the Four Corners area with deep easterly flow across Southern New Mexico allowing for heavy rains to develop over the region.
10/4/2010	Severe Wind	EVENT NARRATIVE: El Paso Electric reported 11 power poles were knocked down causing 11,000 people to be without power for some time. EPISODE NARRATIVE: Easterly winds brought deep moisture into the region. A surface trough extending through the Rio Grande Valley provided the lift for strong to severe thunderstorms to develop.
10/20/2010	Severe Wind	EVENT NARRATIVE: Mesonet site located 18 miles north-northeast of White Sands Main Post reported wind gust of 66 mph. EPISODE NARRATIVE: A strong cutoff low was located over far Southwest Arizona. The nose of a 100 knot jet was rounding the low and moving into Southern New Mexico and Far West Texas. A surface trough was also located near the Rio Grande Valley. All of these features combined to produce severe thunderstorms with hail to the size of baseballs reported.
12/30/2010	Severe Wind	EVENT NARRATIVE: A peak wind gust of 76 mph was reported at the Dripping Springs RAWS. The National Weather Service Office in Santa Teresa, NM recorded a gust to 59 mph and the Las Cruces Airport(KLRU) reported a gust of 58 mph. EPISODE NARRATIVE: A powerful upper low digging out of the Pacific Northwest brought a strong cold front with damaging winds gusts of up to 76 mph to the region
2/1/2011	Extreme Heat/Cold	EVENT NARRATIVE: High temperatures reported across the area on Feb 2nd included 18F at Las Cruces, 16F in Santa Teresa at the National Weather Service Office, 12F at the White Sands Missile Range Headquarters and 13F at Northrup Landing. Morning low temperatures on Feb 3rd included 0F at Las Cruces, -20F at Jornada, -5F at the National Weather Service in Santa Teresa, -10F at the White Sands Missile Range Headquarters and -15F at Northrup Landing. Numerous frozen and broken pipes were reported, natural gas pressure was at all-time lows and schools were closed for 4 days due to all the problems caused by the cold. EPISODE NARRATIVE: A strong upper low dropped down the Northern Rockies which pushed a back door arctic cold front through the region. An upper level ridge was located over the eastern Pacific with the arctic jet steam diving south to the Mexican border. These two features combined to bring extremely cold air into the Western United States from Alaska and Canada. Numerous areas experienced rolling power outages and natural gas shortages along with burst pipes. The state of New Mexico declared a State of Emergency due to the natural gas shortages.
2/3/2011	Extreme Heat/Cold	Arctic cold air caused campus wide freezing of pipes with gas and electrical outages and water damages to buildings
2/27/2011	Severe Wind	EVENT NARRATIVE: A peak gust of 89 mph was reported at the San Augustin Pass RAWS. Other peak gusts across the area included 75 mph at Salinas Peak, 58 mph at the National Weather Service office in Santa Teresa and 61 mph at the White Sands Missile Range Main Post. EPISODE NARRATIVE: A deep upper low was diving down the west coast while a surface low rapidly deepened over the Texas and Oklahoma panhandle area. A tight pressure gradient setup across the region with strong southwest winds ahead of the upper low.
3/7/2011	Severe Wind	EVENT NARRATIVE: The peak gust at the White Sands missile Range Main Post was 71 mph. EPISODE NARRATIVE: A broad area of zonal flow extended across the U.S. with an approaching shortwave trough moving out of Southern California and into Southern New Mexico. This trough combined with an associated cold front to bring strong winds to the eastern slopes and mountain passes of South Central New Mexico
5/12/2011	Severe Wind	Severe winds in Hatch blew off roofs and knocked trees over
5/20/2011	Power Outage	Complete blackout in Hatch due to power outage
6/1/2011	Severe Wind	EVENT NARRATIVE: The Northrup Landing Mesonet site reported a wind gust of 66 mph. EPISODE NARRATIVE: An upper trough was moving onshore while a strong ridge was located over the eastern United States. This setup a moist southerly flow at mid-levels and a dry line was located over the Rio Grande Valley, allowing for severe thunderstorms to develop.

					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
8/12/2010	Severe Wind	(LRU)LAS CRUCES ARPT	0	0	$0	$0	$0	NCDC, 2011
8/24/2010	Flood	LEASBURG	0	0	$0	$0	$0	NCDC, 2011
10/4/2010	Severe Wind	FT FILLMORE	0	0	$5,000	$0	$5,000	NCDC, 2011
10/20/2010	Severe Wind	WHITE SANDS	0	0	$0	$0	$0	NCDC, 2011
12/30/2010	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
2/1/2011	Extreme Heat/Cold		0	0	$400,000	$0	$400,000	NCDC, 2011
2/3/2011	Extreme Heat/Cold	NMSU	0	0	$185,870	$0	$185,870	NMSU, 2012
2/27/2011	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
3/7/2011	Severe Wind		0	0	$0	$0	$0	NCDC, 2011
5/12/2011	Severe Wind	HATCH	0	0	$0	$0	$0	Village of Hatch, 2012
5/20/2011	Power Outage	HATCH	0	0	$0	$0	$0	Village of Hatch, 2012
6/1/2011	Severe Wind	43 MILES NE OF ORGAN WAIDS ARPT	0	0	$0	$0	$0	NCDC, 2012

Date	Hazard	Description
6/1/2011	Severe Wind	EVENT NARRATIVE: A 58 mph wind gust was reported 4 miles west of Organ at a New Mexico Environment Department Mesonet site. EPISODE NARRATIVE: An upper trough was moving onshore while a strong ridge was located over the eastern United States. This setup a moist southerly flow at mid-levels and a dry line was located over the Rio Grande Valley, allowing for severe thunderstorms to develop.
7/1/2011	Severe Wind	EVENT NARRATIVE: A dry microburst affected the National Weather Service Office in Santa Teresa with a measured gust of 70 mph. EPISODE NARRATIVE: Temperatures near the century mark and dry surface conditions led to isolated thunderstorm development with a dry microburst affecting Santa Teresa, New Mexico.
7/13/2011	Severe Wind	EVENT NARRATIVE: National Weather Service Employees saw a landspout tornado about 3 miles west of the office with some dust debris on the ground. The tornado did not strike any structures and remained in the rural desert. EPISODE NARRATIVE: A surface low was setup near the bootheel of New Mexico with southeast winds over far South-Central New Mexico and a southerly flow aloft. This allowed for a brief landspout tornado to occur near the Santa Teresa Airport.
7/15/2011	Flood	Flooding due to several dams in the surrounding Hatch area
8/11/2011	Flood	EVENT NARRATIVE: New Mexico State University police reported a large amount of standing water making for hazardous travel on the eastbound lane of College between Knox and Union. EPISODE NARRATIVE: A weak surface low was located near Las Cruces with very little flow aloft allowed very slow moving thunderstorms to develop across the area. Very heavy rain occurred over Las Cruces along with localized flooding.
9/15/2011	Severe Wind	EVENT NARRATIVE: A 58 mph gust was recorded at the National Weather Service office in Santa Teresa. EPISODE NARRATIVE: An upper level trough was located over Western Arizona with a 75+ knot jet streak moving across Southern New Mexico in southwest flow. Some Baja moisture was being tapped with dew points in the mid to upper 50s creating plenty of instability across the region.

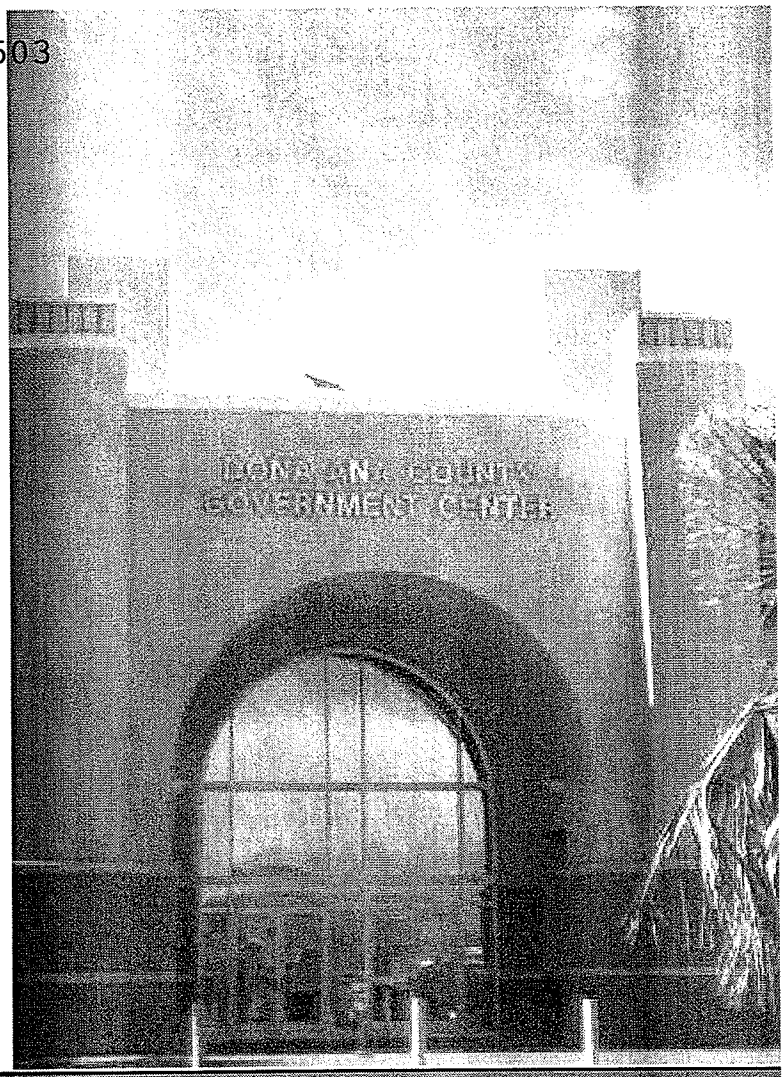
					Damage Estimates			
Date	Hazard	Location	Fatalities	Injuries	Property	Crop/Livestock	Total	Data Source
6/1/2011	Severe Wind	4 MILES W OF ORGAN	0	0	$0	$0	$0	NCDC, 2012
7/1/2011	Severe Wind	STRAUSS	0	0	$0	$0	$0	NCDC, 2012
7/13/2011	Severe Wind	STRAUSS	0	0	$0	$0	$0	NCDC, 2012
7/15/2011	Flood	HATCH	0	0	$0	$0	$0	Village of Hatch, 2012
8/11/2011	Flood	NMSU	0	0	$0	$0	$0	NCDC, 2012
9/15/2011	Severe Wind	ANTHONY, STRAUSS	0	0	$0	$0	$0	NCDC, 2012

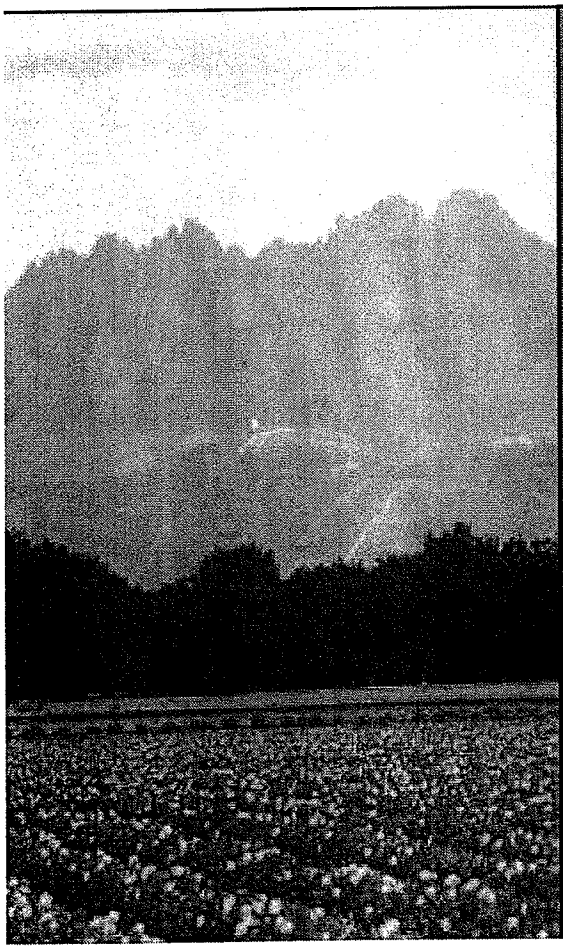
Appendix F

Approval and Adoption Records

Appendix G

Plan Maintenance Review Memorandums





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