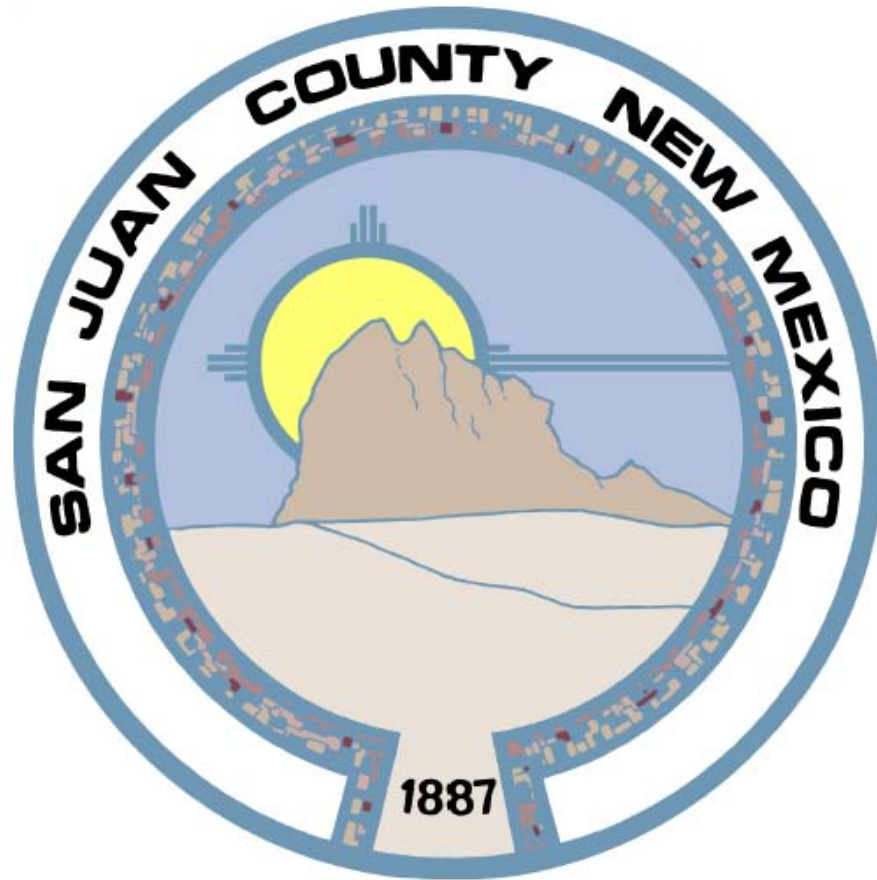
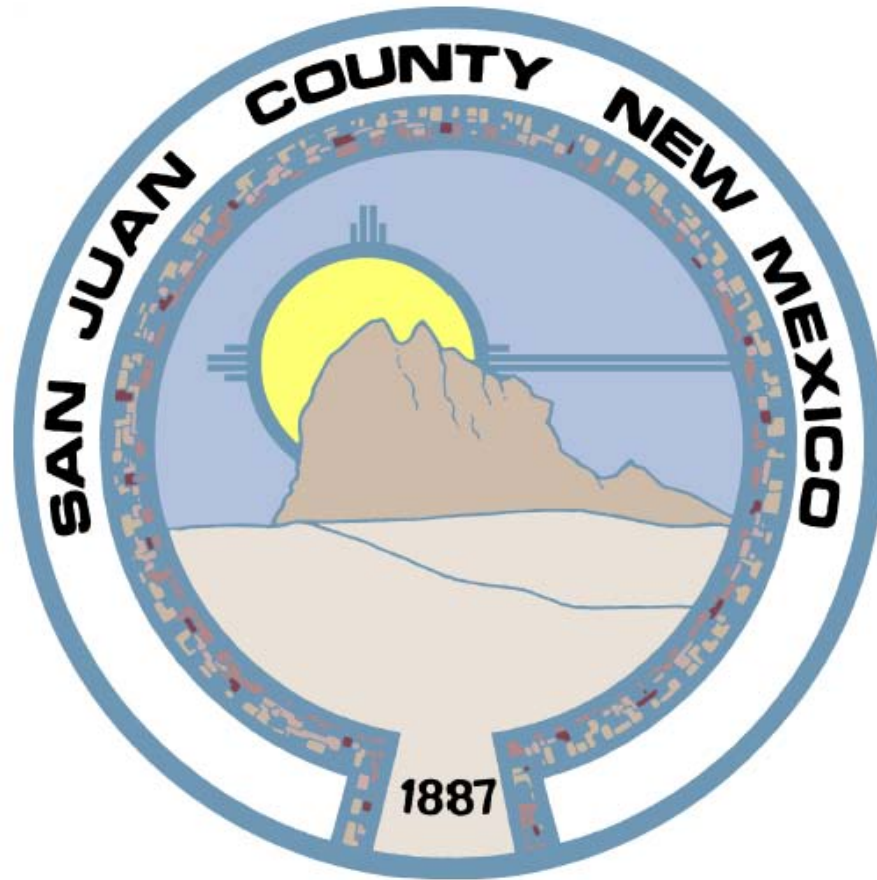


# San Juan County Mitigation Project 2004



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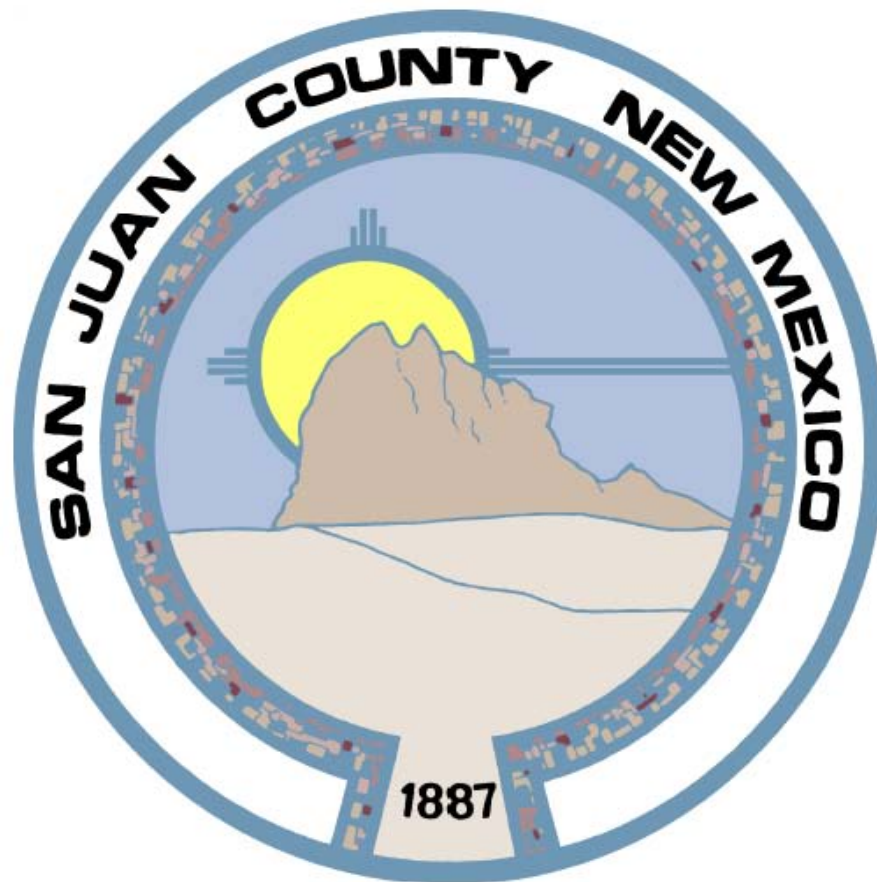
# San Juan County Mitigation Project 2004

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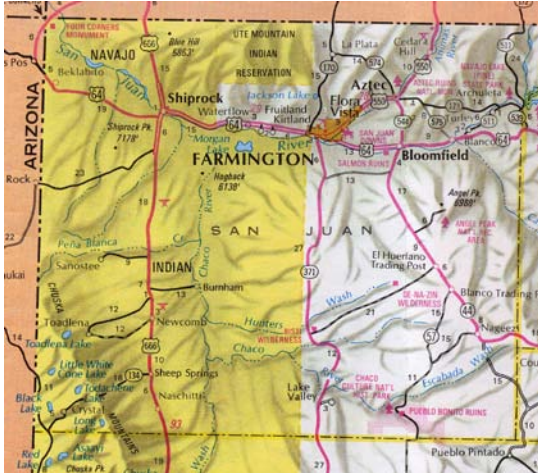
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**San Juan County Mitigation Project  
2004**



**Part I  
Introduction**

# San Juan County Mitigation Project Part I. Introduction



## Section 1. Project Statement

The San Juan County Mitigation Project is an effort to reduce or eliminate the possible loss of life, damage or destruction of property, and danger to the environment caused by natural hazards, man-made hazards, and man-caused hazards. It is recognized that within San Juan County, there exist situations that threaten the lives and property of its citizens. The risks caused by any of these situations may differ and complete solutions may never be possible; however, the risks to life and property caused by these events can be reduced. Additionally, it is

acknowledged that when a hazardous event occurs, there are great economic effects on the community, and in many cases businesses never recover. The purpose of the San Juan County Mitigation Project is to identify the hazards that exist within the county, determine the level of risk these hazards represent, devise methods of either reducing or eliminating these effects, and to establish a plan to implement the identified strategies in a logical and orderly manner.

The San Juan County Mitigation Project is a living document, and as such will be reviewed and updated as necessary in order to (a) evaluate the progress made in the reduction or elimination of hazardous situations within the county, and (b) identify new hazards and new techniques available to reduce or eliminate hazards that have previously been identified.

Under the provisions of the Federal Emergency Management Agency Disaster Mitigation Act of 2000 (DMA 2000), each county or parish within the United States of America should have in place a plan for the mitigation of the identified hazards that exist within its jurisdiction. In addition, these plans should be coordinated with those of surrounding counties, the state, and neighboring states, when necessary. This coordinated approach to hazard mitigation will ensure that the actions taken in one jurisdiction will not adversely affect the residents in surrounding areas.

Additionally, prospective growth into high-risk areas can be avoided by identifying existing hazards and the areas they can affect. This in turn will ensure that potential damages will not be increased still further.

Historically, planning to avoid hazardous environments was not a priority, and subsequently many communities were established within areas that could be affected by local hazards. In addition, new, man-made hazards are constantly being created as new

industrial areas are developed, hazardous material dumps are filled, and by the construction of new road projects. When hazards occur and the same population and property is affected repeatedly, a repetitive loss is created. By identifying these areas of repetitive loss, the reasons behind them and solutions for them, a plan to reduce the threat to persons and property can be developed.

Hazards can be broken down into three main categories, as follows:

**Natural hazards.** A natural hazard is anything that occurs due to weather and geological events that is outside man's control. Such events include floods, earthquakes, severe storms, tornados, landslides, forest fires, and drought.

**Man-made hazards.** A man-made hazard is an event caused by human construction or design failure. Such events could include dam failure, pipeline break, erosion, landslide or flooding due to construction, and hazardous material spills.

**Man-caused hazards.** A man-caused hazard is any event that has been caused due to the intentions or negligence of man. Such events could include hazardous material transport accidents, arson or accidental fires, and acts of terrorism.

The overall purpose of the San Juan County Mitigation Project is to reduce or eliminate hazardous conditions, thereby improving the quality of life for its citizens. To this end the administrations of San Juan County and the participating jurisdictions of Aztec, Bloomfield, and Farmington have approved this plan with the intention of developing and implementing the projects outlined to mitigate the identified hazardous conditions.

The task of creating the San Juan County Mitigation Project began with the establishment of a working group by Don Cooper, San Juan County Emergency Manager. San Juan County has three jurisdictions within its borders: Aztec, Bloomfield, and Farmington, each of which is a participant in this mitigation effort. A portion of the Navajo Nation is also located in San Juan County. Although the Navajo Nation was represented at the initial organizational meeting, it has not participated past that point, even though it has been notified of all scheduled meetings. This working group is comprised of members of the county staff and city staffs of all participating jurisdictions. The members of the working group are Don Cooper, San Juan County Emergency Manager; George Duncan, Bloomfield Fire Chief; Michael Neal, Aztec Police Chief; Rod Hunt, City of Farmington, and Robert Martin, Farmington Fire Chief. The working group then met regularly to identify and analyze the hazards that could affect San Juan County. In addition to meetings of the working group, the public has been invited to participate in the planning process through advertised public meetings (television, radio, and print media), and through use of a questionnaire. (See Attachments A and B for additional details of meetings, advertising, and questionnaire.) San Juan County contracted with Southwest Training Institute & Consulting to work with their working group in the creation of this project.

Once the hazards were identified, an effort was made to determine the risk each hazard posed to county residents, and its historic frequency of occurrence. This process was accomplished by a historical review of local newspapers, county documents, public input, New Mexico state government records, and university sources. Additionally, the hazard risk was projected from the aspect of the worst-case scenario for both the present population and the projected increase in population five years from now. This information is located in Part II, Risk Identification and Analysis.

After identification of the hazards and the risks they pose to the community, action plans were formulated in order to reduce or eliminate each hazardous situation. These plans were developed as a result of the working group, public input, and research conducted from sources including state drought planners, the National Weather Service, the U.S. Army Corps of Engineers, FIRM floodplain maps, and the University of New Mexico. These action plans were prioritized based on risk factors and frequency of occurrence. Once the plan strategies and priority were established by the working group, they were presented to the San Juan County Commission; the Aztec, Bloomfield, and Farmington City Councils; and members of the public by posting at the public libraries for review and comment. The final San Juan County Mitigation Project of 2004 was then completed and approved by the San Juan County Commission and the Aztec, Bloomfield, and Farmington City Councils. The strategies and action plans established to mitigate hazards within San Juan County and the participating jurisdictions are discussed in Part III, Implementation Strategies.

As a living document, the San Juan County Mitigation Project includes provisions for its annual review and updating. Not only is this process set forth in Part IV, Implementation and Monitoring Plan, it is established by resolution by each governing body represented in this plan. See Part I, Section 3, Resolutions.

## **Section 2. Executive Summary**

# **San Juan County Mitigation Project 2004**

### **INTRODUCTION**

The San Juan County Mitigation Project is a multi-jurisdictional plan that encompasses the mitigation concerns of San Juan County, the City of Aztec, the City of Bloomfield, and the City of Farmington. The purpose of mitigation is to identify the hazards that exist and develop strategies to reduce or eliminate either the hazard or the damage potential that it poses. Additionally, the Federal Emergency Management Agency (FEMA) has established every county's need to create and maintain a mitigation plan by June 2004 in order to be eligible for future funding under the Disaster Mitigation Act of 2000.

### **GOAL**

The goal of the San Juan County Mitigation Project is to identify the potential hazards that exist within the county, and then to develop strategies that will reduce or eliminate them in the future. Additionally, this project is developed to comply with the requirements of the Disaster Mitigation Act of 2000 in order to obtain future funding for specific mitigation projects.

### **PLAN DEVELOPMENT**

The San Juan County Mitigation Project came into being on January 30, 2003 with a meeting at the San Juan County Emergency Management Office in Aztec, New Mexico. That meeting established a working group that included members from San Juan County, the City of Aztec, the City of Bloomfield, and the City of Farmington. The chairman of this working group is Don Cooper, the Emergency Manager for San Juan County. Regular meetings of the San Juan County working group were held, including public meetings and the mailing of questionnaires, in order to identify the region's potential hazards and to develop strategies for their reduction or elimination.

### **HAZARD IDENTIFICATION AND STRATEGIES**

The San Juan County Mitigation Project has identified four major types of hazard within the county and the cities of Aztec, Bloomfield and Farmington. These hazards are drought, flooding, wildfire, and hazardous material transport. Although other hazards such as severe weather, earthquakes, and terrorism can occur, it was determined that the possibility of their occurrence was less probable than that of drought, flooding, wildfire or hazardous material incidents. These additional hazards will be addressed as part of the

on going mitigation efforts that will take place within San Juan County and the affected jurisdictions.

## **DROUGHT**

As the entire Southwest continues to feel the effects of a reduction in rain and snowfall, the demands for water put a strain on this limited resource. Presently the extent and duration of this drought remain unknown. Speculation varies concerning the severity of this drought from a ten-year drought cycle to a two thousand-year drought cycle. No matter what drought cycle this is, two facts remain: (1) there is a drought at this time that is straining the water resources within San Juan County, and (2) the county's water needs will continue to climb as its population increases. Mitigation strategy concerning drought cannot eliminate its existence. However, it can help ease the demands on the limited water supply in order to create continuation of sustainable growth within the county and the affected jurisdictions.

**Landscaping and maintenance.** Residential use of water for the establishment and maintenance of landscaping is a prime area of consideration in reducing water use. Regulations limiting the time of day and specific day(s) of the week in which residential consumers are allowed to water their yards can reduce both the overall consumption of water and ease peak use demands on the system. The establishment of watering restrictions by local governments to allow watering only during normally lower system demand periods can also reduce the danger of damaging the water system and limit landscape watering to times when there will be less evaporation, causing more effective usage.

**Rebate programs.** Providing incentives to homeowners for converting existing high maintenance landscaping to local vegetation requiring less water can provide for an additional reduction in overall water usage throughout the county. Rebate programs for replacing current high-flow toilets and residential showerheads to more efficient models will further reduce water demand.

**Building codes and regulations.** The establishment of building codes and regulations governing future construction of residential and commercial projects within the county can create a reduction in future water demands. These codes and regulations can restrict the future use of landscaping and building construction to those requiring a more efficient use of water.

**Agricultural water usage.** Monitoring agricultural water usage through metering systems will ensure that these users stay within their water right limitations. Offering monetary incentives to commercial agricultural users who convert to water-conserving irrigation systems will also reduce the demands on the water table.

## **FLOODING**

Flooding continues to plague San Juan County and the cities of Aztec, Bloomfield and Farmington. The Animas River runs through Aztec and the San Juan River runs through Bloomfield. Farmington sits at the confluence of these two rivers. In addition to the potential flooding caused by these rivers, there are also possible dangers of dam failure or flash floods. Further, severe rainstorms can create localized flooding due to runoff and overwhelm the present storm drainage systems.

The present drought conditions in San Juan County specifically add to the flooding danger in two ways. The continuation of the drought conditions results in a reduction of ground vegetation, which reduces the land's ability to slow down runoff. Additionally, as the drought continues, the ground hardens, resulting in a reduction in its ability to absorb moisture. The combination of these two factors increases the chance of potential damage caused by flash flooding throughout the county.

**Building Codes.** The strict enforcement of present building codes will decrease potential damage from flooding conditions by eliminating growth into flood plains. Building codes need to be modified to include provisions concerning structural foundations. Many structures meet the minimum construction height above projected flood water levels. However, when flooding does occur, the structure's foundations are undercut, which results in structural damage. Finally, any structure that sustains damage during future floods should be required to follow the more stringent building codes.

With increasing demands on storm drainage due to severe rainstorms, building codes need to be revised to require the construction of water retention systems. This will require builders to pond, on site, the amount of water that could fall on any site during a 100-year rainstorm. This requirement will reduce the strain on the present storm drainage system.

**Zoning Codes.** Where the potential for flooding exists, zoning codes can establish land uses that will not conflict with this potential threat to life and property. Lands within flood zones can be developed into recreational areas that can greatly reduce the damage potential during floods. Any area that sustains damage due to flooding which requires redevelopment needs to follow the newer zoning codes.

**Flood insurance.** Although some jurisdictional areas within San Juan County currently maintain federal flood insurance, most of the county is not covered. With the establishment of a designated county flood plain manager, a number of areas have become eligible for this insurance, and an effort should be made to obtain it.

**Flood plain management.** With the establishment of a flood plain manager in San Juan County, a comprehensive flood plain management plan will identify the areas most at risk. Coordination between the county and its jurisdictions can insure that a reduction in the present level of risk occurs.

## **WILDFIRE**

The amount of fuel accumulating along the river bottoms in San Juan County combined with the present drought conditions throughout the southwest has created a very dangerous environment. As seen during the Albuquerque Bosque fires in the summer of 2003, the threat to structures in the area is high, and increases with arid conditions and the area's overgrowth. Unlike the Bosque surrounding the Rio Grande River in the Albuquerque metropolitan area, San Juan County has three rivers coming together in one location, which also happens to be the county's largest population center. In addition, while the Bosque area in Albuquerque mostly consists of public recreational lands, the river bottom lands in San Juan County are for the most part privately owned.

**Defensible Space.** Homeowners in San Juan County's river bottom areas can create defensible spaces around their residences that will help protect their homes and decrease the risk of loss. In an effort to provide these homeowners with information concerning the risk of fire and the actions they can take in reducing the risk, a Fire Wise program of public information will be instituted.

## **HAZMAT**

As the amount of hazardous material transported through San Juan County continues to increase, the potential for an accidental hazardous material release also increases. The only possible way to eliminate this potential hazard would be to ban the transport of all hazardous materials within the county. Since this is not a practical solution, the county must take all other reasonable measures to reduce this risk.

**Route.** The bulk of the hazardous material being transported within San Juan County travels south from Utah on U.S. 491 (formerly U.S. 666) to Shiprock, west on U.S. 64 to Farmington, east on State Road 516 to Aztec, and southwest from Aztec through Bloomfield on State Road 550. Although an accidental release of hazardous material would create problems anywhere along this route, the population centers involve a higher potential threat to human life and property. Presently this route carries hazardous material in close proximity to a hospital in Farmington, along with public schools and other commercial ventures. Another potentially dangerous factor is that this route contains sharp turns and jogs in Aztec and Bloomfield prior to exiting back into open country. The maneuvering required in both cities creates additional potential for hazardous material transport accidents.

**Recommendations.** The strict enforcement of the present bypass around Farmington as the route for all through-bound hazardous material will reduce the amount of hazardous material traveling through the city. This route regulation will require legislative action to enable its enforcement. Additionally, traffic studies will establish the types and amounts of hazardous material presently moving through the area and examine accidents that have occurred along the existing route. The results of this study can further refine the restrictions concerning the transport of hazardous materials within San Juan County.

The long-range solution is the establishment of a new hazardous material route that completely bypasses Farmington, Aztec and Bloomfield. Although it may not be possible to create a bypass for the entire area, secondary projects include redesigning the intersection of State Road 516 and U.S. 550 within Aztec, as well as the jog that this route takes within Bloomfield, where a short east/west detour is required along U.S. 64.

## **CONCLUSION**

The adoption of the San Juan County Mitigation Project will establish initial measures to reduce or eliminate the hazards that exist within the county. This resolution establishes a commitment by San Juan County, the City of Aztec, the City of Bloomfield, and the City of Farmington to the ongoing process of mitigation. The strategies set forth in this plan strive to create a better quality of life and a more sustainable future for the residents of San Juan County.

The San Juan County Mitigation Project further establishes a process whereby the mitigation strategies and the progress made toward implementing them will receive an annual review and evaluation. This review and evaluation will determine if projects have been completed, and whether pending projects will continue to effectively reduce or eliminate the intended hazards. The annual review of the San Juan County Mitigation Project will also identify new or changing hazardous conditions within San Juan County and design mitigation strategies to reduce or eliminate them.

### **Section 3. Resolutions**

#### **San Juan County Plan Adoption Resolution**

The San Juan County Commission acknowledges that natural and man-made hazards exist within the county. These hazards have the potential of causing harm to the citizens, property, economy, and environment within San Juan County.

The hazards identified for immediate consideration include drought, flooding, wildfire, and hazardous material transport.

A San Juan County Mitigation Project has been developed that provides strategies for elimination or reduction of these hazards.

The San Juan County Mitigation Project is the result of a cooperative effort of governmental agencies and community input.

Be it resolved by the San Juan County Commissioners that:

The San Juan County Mitigation Project be adopted as the county's official plan.

San Juan County will ensure that all future planning, including comprehensive plans, will take into consideration the hazards that can affect future projects. In addition, the building inspector's office will consult the San Juan County Mitigation Project and the county emergency manager prior to the approval of future construction within the county to ensure that it does not conflict with the process of mitigating existing hazards.

The County's Emergency Manager will monitor the progress in implementing the strategies of the San Juan County Mitigation Project.

San Juan County officials and agencies, identified by the San Juan County Mitigation Project as responsible for specific mitigation tasks under this plan, will provide the County's Emergency Manager a progress report by July 1 of each year.

The County's Emergency Manager, with input from governmental planning agencies and the public, will review and modify the San Juan County Mitigation Project as necessary to reflect the progress made in implementing this plan and any new hazard strategies that have been identified.

The County's Emergency Manager will provide an annual progress report to the County Commission concerning these efforts by September 1 of each year. This report will (1) identify the progress of mitigation efforts in meeting the plan's goals and objectives, and (2) include all new strategies that have been developed.

## **City of Aztec Plan Adoption Resolution**

The City Council for the City of Aztec acknowledges that natural and man-made hazards exist within the county. These hazards have the potential of causing harm to the citizens, property, economy, and environment within the city.

The hazards identified for immediate consideration include drought, flooding, wildfire, and hazardous material transport.

A San Juan County Mitigation Project has been developed that provides strategies for elimination or reduction of these hazards, including those of the City of Aztec.

The San Juan County Mitigation Project is the result of a cooperative effort of governmental agencies and community input.

Be it resolved by the Aztec City Council that:

The San Juan County Mitigation Project be adopted as the city's official plan.

The City of Aztec will ensure that all future planning, including comprehensive plans, will take into consideration the hazards that can affect future projects. In addition, the building inspector's office will consult the San Juan County Mitigation Project and the county and city emergency managers prior to the approval of future construction within the city to ensure that it does not conflict with the process of mitigating existing hazards.

The City Manager will monitor the progress in implementing the strategies of the San Juan County Mitigation Project.

Aztec city officials and agencies, identified by the San Juan County Mitigation Project as responsible for specific mitigation tasks under this plan, will provide the County's Emergency Manager a progress report by July 1 of each year.

The County's Emergency Manager, with input from governmental planning agencies and the public, will review and modify the San Juan County Mitigation Project as necessary to reflect the progress made in implementing this plan and any new hazard strategies that have been identified.

The County's Emergency Manager will provide an annual progress report to the City of Aztec concerning these efforts by September 1 of each year. This report will (1) identify the progress of mitigation efforts in meeting the plan's goals and objectives, and (2) include all new strategies that have been developed.

## **City of Bloomfield Plan Adoption Resolution**

The City Council for the City of Bloomfield acknowledges that natural and man-made hazards exist within the county. These hazards have the potential of causing harm to the citizens, property, economy, and environment within the city.

The hazards identified for immediate consideration include drought, flooding, wildfire, and hazardous material transport.

A San Juan County Mitigation Project has been developed that provides strategies for elimination or reduction of these hazards, including those of the City of Bloomfield.

The San Juan County Mitigation Project is the result of a cooperative effort of governmental agencies and community input.

Be it resolved by the Bloomfield City Council that:

The San Juan County Mitigation Project be adopted as the city's official plan.

The City of Bloomfield will ensure that all future planning, including comprehensive plans, will take into consideration the hazards that can affect future projects. In addition, the building inspector's office will consult the San Juan County Mitigation Project and the county and city emergency managers prior to the approval of future construction within the city to ensure that it does not conflict with the process of mitigating existing hazards.

The City Manager will monitor the progress in implementing the strategies of the San Juan County Mitigation Project.

Bloomfield city officials and agencies, identified by the San Juan County Mitigation Project as responsible for specific mitigation tasks under this plan, will provide the County's Emergency Manager a progress report by July 1 of each year.

The County's Emergency Manager, with input from governmental planning agencies and the public, will review and modify the San Juan County Mitigation Project as necessary to reflect the progress made in implementing this plan and any new hazard strategies that have been identified.

The County's Emergency Manager will provide an annual progress report to the City of Bloomfield concerning these efforts by September 1 of each year. This report will (1) identify the progress of mitigation efforts in meeting the plan's goals and objectives, and (2) include all new strategies that have been developed.

## **City of Farmington Plan Adoption Resolution**

The City Council for the City of Farmington acknowledges that natural and man-made hazards exist within the county. These hazards have the potential of causing harm to the citizens, property, economy, and environment within the city.

The hazards identified for immediate consideration include drought, flooding, wildfire, and hazardous material transport.

A San Juan County Mitigation Project has been developed that provides strategies for elimination or reduction of these hazards, including those of the City of Farmington.

The San Juan County Mitigation Project is the result of a cooperative effort of governmental agencies and community input.

Be it resolved by the Farmington City Council that:

The San Juan County Mitigation Project be adopted as the city's official plan.

The City of Farmington will ensure that all future planning, including comprehensive plans, will take into consideration the hazards that can affect future projects. In addition, the building inspector's office will consult the San Juan County Mitigation Project and the county and city emergency managers prior to the approval of future construction within the city to ensure that it does not conflict with the process of mitigating existing hazards.

The City Manager will monitor the progress in implementing the strategies of the San Juan County Mitigation Project.

Farmington city officials and agencies, identified by the San Juan County Mitigation Project as responsible for specific mitigation tasks under this plan, will provide the County's Emergency Manager a progress report by July 1 of each year.

The County's Emergency Manager, with input from governmental planning agencies and the public, will review and modify the San Juan County Mitigation Project as necessary to reflect the progress made in implementing this plan and any new hazard strategies that have been identified.

The County's Emergency Manager will provide an annual progress report to the City of Farmington concerning these efforts by September 1 of each year. This report will (1) identify the progress of mitigation efforts in meeting the plan's goals and objectives, and (2) include all new strategies that have been developed.

#### **Section 4. Description of San Juan County**

San Juan County is located in the extreme northwest corner of New Mexico. The northwest corner of the county forms the “Four Corners” area where it borders Colorado, Utah, and Arizona. It takes its name from the San Juan River, which has its headwaters in the nearby San Juan Mountains. Ancient Anasazi ruins are located in Aztec, the county seat, at Aztec Ruins National Park. Large parts of Chaco Canyon National Monument and the Navajo Reservation are also contained within county boundaries. Farmington is its largest city. The county's economy is largely based on natural resources, power production, agriculture, and regional trade. San Juan County contains 5,538.36 square miles and has a population density of 20.6 persons per square mile.

Transportation routes located in San Juan County include U.S. 491 (formerly U.S. 666), running on a north/south axis in the western portion of the county from Cortez, Colorado in the north through Shiprock and into McKinley County to the south. U.S. 550 enters the county from Durango, Colorado in the north and runs through Aztec and Bloomfield and into Sandoval County to the southeast. N.M. 170 starts at the Colorado border, and ends in Farmington. N.M. 371 runs south from Farmington and into McKinley County. In addition, San Juan County is traversed along an east/west axis by U.S. 64, which runs from Rio Arriba County in the east to Arizona in the west.

San Juan County is governed by a county commission, with a county manager handling the county's day-to-day operations. The county's law enforcement is provided by municipal police departments in Aztec, Bloomfield, and Farmington; the County Sheriff's Department; and the New Mexico State Police. Fire protection is provided by municipal fire departments in Farmington, and various volunteer departments located throughout the county.

For the past two years, San Juan has been the fastest growing county in New Mexico. According to the U.S. Census Bureau, its population increased by more than 24% between 1990 and 2000, to a total of 113,801. The Census Bureau projects its population to grow to 116,779 by July 2005, a 7.1% change from 2000, and projects a population of 164,012 by the year 2030.

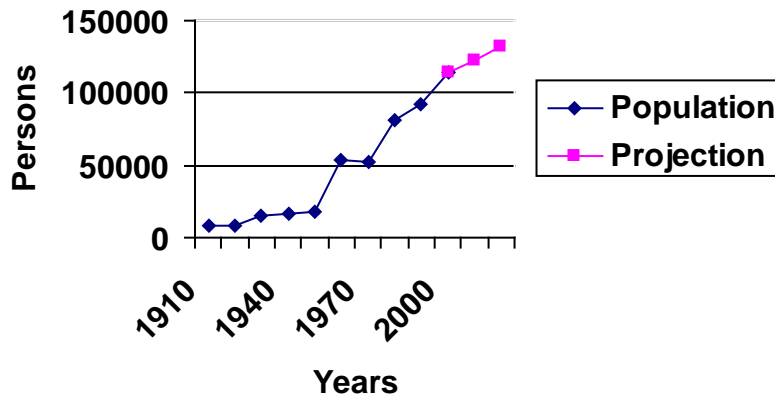
According to the 2000 U.S. Census, there are presently 43,221 housing units in San Juan County. Of these units, 37,711 are occupied, with a vacancy rate of 9.3% for rental units. San Juan County has shown consistent growth based on building permits. Over the past seven years, an average of 80 building permits per year has been issued in the county's unincorporated area.

San Juan County Population History										
Year	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Population	8,504	8,333	14,701	17,115	18,292	53,306	52,517	81,433	91,605	113,801

Source: U. S. Census data

San Juan County Building Permits			
Year	Type	Number of Units	Cost
1996	Single Family Unit	105	\$11,851,063
1997	Single Family Unit	72	\$5,339,528
1998	Single Family Unit	85	\$10,684,936
1999	Single Family Unit	66	\$8,949,431
	5 + Family Unit	1 (6 Units)	\$1,073,000
2000	Single Family Unit	65	\$9,141,530
	3-4 Family Unit	1 (3 Units)	\$130,560
2001	Single Family Unit	65	\$11,127,207
2002	Single Family Unit	98	\$14,699,185

### San Juan County Population Projection



The San Juan County population projection was taken from the Farmington Comprehensive Plan. Source: the 2000 U.S. Census; Bureau of Business and Economic Research, University of New Mexico.

**Section 5. Description of City of Aztec**

Aztec is located on the Animas River in the northwest part of San Juan County, east of Farmington and north of Bloomfield. Aztec began as a community of fur trappers in the early 1820's. The city of Aztec was laid out in 1890, developed into an agricultural area, and did not grow much until after 1905. Eventually Aztec became San Juan County's county seat. Aztec is traversed by U.S. 550 from the Colorado border through town and south to Bloomfield. Aztec is connected with Farmington by N.M. 516. The city of Aztec contains 9.8 square miles, has a population density of 655.7 persons per square mile, and is located at an elevation of 5,644 feet.

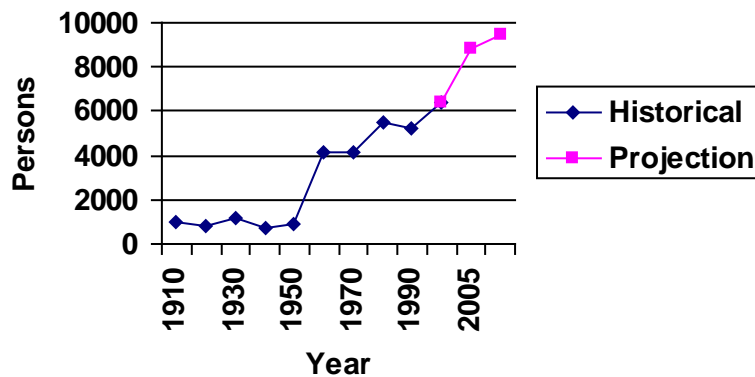
Aztec is governed by a City Commission, with the city manager running the city's day-to-day operations. The city's public safety needs are provided by a municipal police department and a municipal fire department. These services are augmented by the County Sheriff's Department, the New Mexico State Police, and various municipal and volunteer fire departments.

Aztec's present population is 6,378, which is a 16.4% increase over the 1990 level of 5,239. Presently 2,545 housing units exist in Aztec, with a vacancy of approximately 215 units.

<b>Aztec Population History</b>										
	<b>1910</b>	<b>1920</b>	<b>1930</b>	<b>1940</b>	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
<b>Historical</b>	975	851	1,183	756	885	4137	4,137	5,512	5,239	6,378

<b>Aztec Population Projection</b>			
<b>Year</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Population</b>	6378	8824	9492

## Aztec Population Projection



*This population projection was based on the average percentage of population of Aztec to San Juan County from 1910 to the present, based on historical data. The projections for 2005 and 2010 used the established average against the county's projected population from the Farmington Comprehensive Plan.*

*Note: Building permit data was unavailable for the City of Aztec at the time of the plan's completion.*

### Section 6. Description of City of Bloomfield

Bloomfield is located to the east of Farmington and south of Aztec in the northwest corner of San Juan County. The city is located on the San Juan River and was founded in 1881 and incorporated in 1950. Presently Bloomfield's economy is based on the oil and gas industry, which began in the 1950's. Located outside of Bloomfield is a large amount of petroleum-related industry. Bloomfield is traversed from north to south by U.S. 550, which runs from Aztec in the north and south to I-40 and Albuquerque. Bloomfield is also traversed from east to west by U.S. 64, which runs from Rio Arriba County in the east to Farmington in the west. Bloomfield contains 5.06 square miles, has a population density of 1280.7 persons per square mile, and is located at an elevation of 5,600 feet.

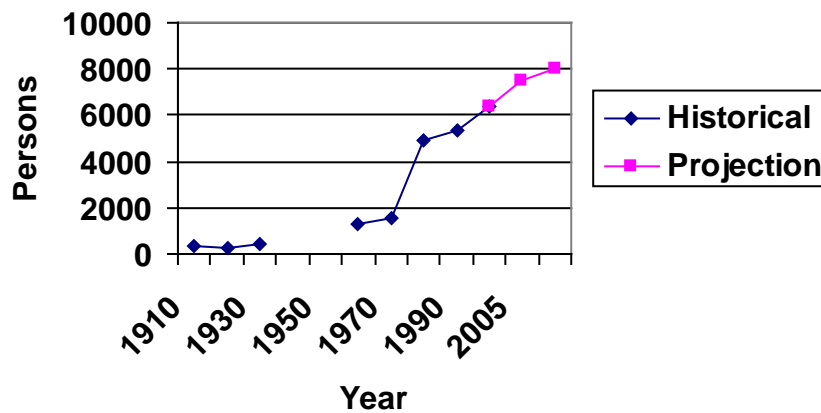
Bloomfield is governed by a Mayor/City Council/City Manager system, with the city manager running the city's day-to-day operations. Public safety for Bloomfield is provided by the Bloomfield Police Department and the Bloomfield Fire Department. These efforts are augmented by the County Sheriff's Department, the New Mexico State Police, and other area fire departments and volunteer fire departments.

According to the 2000 U.S. Census, Bloomfield's present population is 6,414, which is a 23.1% increase from the 1990 figure of 5,367. In addition, Bloomfield has 2,446 housing units, with only 224 units vacant.

Bloomfield Population History										
	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Historical	316	258	407	---	---	1,292	1,574	4,881	5,367	6,417

Bloomfield Population Projection			
Year	2000	2005	2010
Population	6417	7476	8042

### Bloomfield Population Projection



*The population projection was based on the average percentage of population between Bloomfield and San Juan County. Population data for 1940 and 1950 was missing from the available U.S. Census information for those years.*

## Section 7. Description of City of Farmington

Farmington is located in the northwestern part of San Juan County and is the county's largest metropolitan area. It was established in 1876 at the confluence of the Animas, La Plata, and San Juan Rivers. Originally called Junction City, it was later renamed Farmington, due to its largely agricultural economy. The city was incorporated in 1901 and the w was dropped from its name, finally becoming Farmington. The 1950's proved to be a major economic boom for Farmington due to the development of the oil and gas industry. Between 1950 and 1960, Farmington's population went from 3,637 to 23,786. Although the community continues to grow, it is not presently expected that there will be a rapid population increase anytime soon. Farmington consists of 26.98 square miles, is located at an elevation of 5,625 feet, and has a population density of 1,424.5 persons per square mile.

Farmington Population History										
	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
<b>Historical</b>	785	728	1,350	2,161	3,637	23,786	21,979	32,677	33,997	37,844

Farmington is governed by a Mayor/City Council/City Manager form of government which has four council members. The community's public safety needs are served by a municipal police department of 106 sworn officers and a municipal fire department of 76 fire fighters. The Farmington Fire Department maintains a HAZMAT capability and is responsible for responding to HAZMAT emergencies throughout the region. Public safety is further augmented by the San Juan County Sheriff's Department, the New Mexico State Police, and volunteer fire departments located throughout the area.

Farmington's population projection varies depending on the method used to produce it. The projections depicted in this report were taken from the Farmington Comprehensive Plan. Four methods were used in the Farmington Comprehensive Plan to project the city's future population. The following descriptions have been extracted from that plan.

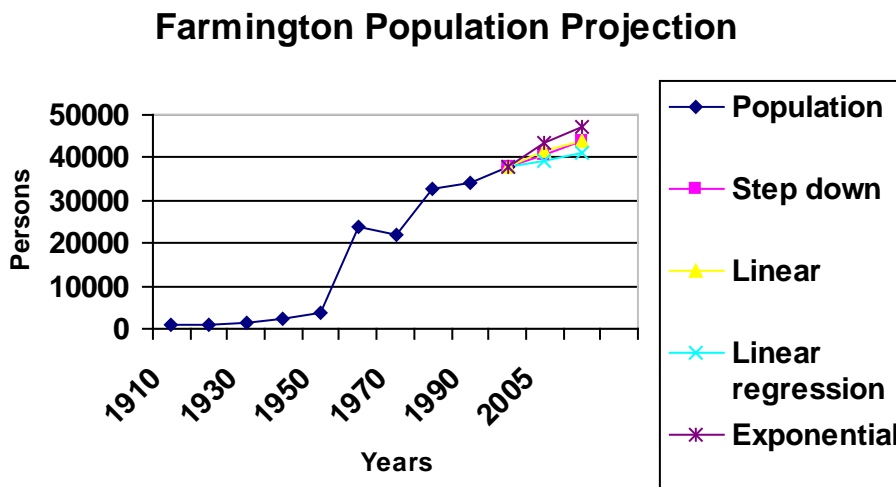
**Step Down Method** is a ratio-share technique, where a ratio is established between the county's population and the city's. Through maintaining the city's proportional relationship to the county from the 2000 Census (33%) the population of Farmington would equal 55,707 by 2020.

**Linear Regression** is a trend extrapolation technique that aggregates data from the past to project future values. This technique produced a projection of 48,745 in 2020, and suggests that the city's share of the county's population will gradually decline.

**Linear Regression on the city’s proportional relationship to the county** is also a trend extrapolation technique. This method showed that the city’s share of county population decreases over time and produced the most conservative projection of 43,841 in the year 2020.

**Exponential Growth** is a trend extrapolation technique that produced the highest projection, 55,620 in the year 2020.

Farmington Population Projection		
	2005	2010
Step Down Method	40,814	43,903
Linear Regression	41,407	43,853
Linear Regression on the city’s proportional relationship to the county	39,441	40,937
Exponential Growth	43,297	47,067



*Farmington population projections were drawn from the Farmington Comprehensive Plan.*

According to the 2000 U.S. Census, there are 15,077 housing units in Farmington, of which approximately 1,095 are vacant. Over the past seven years the number of new building starts has varied from a high of 182 in 2002 to a low of 104 in 1999 and 2000. The average number of building starts is approximately 123.

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Farmington Building Starts

Year	Type	Number of Units	Cost
1996	Single Family Unit	135	\$10,960,171
	3-4 Family unit	2 (6 Units)	\$274,794
1997	Single Family Unit	115	\$11,813,937
1998	Single Family Unit	104	\$12,959,239
	5 + Family Unit	8 (60 Units)	\$2,135,765
1999	Single Family Unit	104	\$14,145,871
2000	Single Family Unit	105	\$13,434,566
2001	Single Family Unit	182	\$17,664,091

*Source: U.S. Census data*