

**ENVIRONMENTAL ASSESSMENT**  
**MONTOYAS ARROYO IMPROVEMENTS**  
for the  
**SOUTHERN SANDOVAL COUNTY ARROYO FLOOD CONTROL AUTHORITY**  
located in  
**SANDOVAL COUNTY, NEW MEXICO**  
**CWSRF Project Number: 018**

**BACKGROUND**

Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) is a quasi-governmental agency formed in the early 1990s for the purpose of providing flood control in the rapidly growing urban area contained in the southeastern corner of Sandoval County and is permitted under a National Pollution Discharge Elimination System (NPDES) permit, #NMR040000. This permit covers discharges from small municipal separate storm sewer systems. The geographic boundaries of SSCAFCA's jurisdiction are bounded by the Bernalillo-Sandoval county line to the south, the Rio Grande to the east, U.S. Highway 550 to the north, and the boundary between the Rio Puerco and Rio Grande watersheds to the west. The proposed project is to alleviate potential flooding issues along the Montoyas arroyo located in the northwest quarter of the Village of Corrales, Sandoval County, New Mexico as shown on the map enclosed as Figure 1.

The proposed project is considered to be a Federal action requiring compliance with the National Environmental Policy Act (NEPA). In accordance with the environmental review requirements of the Council on Environmental Quality found at 40 Code of Federal Regulations (CFR) Part 1500, and with the use of the Environmental Protection Agency's (EPA) implementing regulations found at 40 CFR Part 6 entitled "Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act" as guidance, the EPA is preparing this Environmental Assessment to assist in determining the environmental impacts of the proposed action, and in evaluating whether an Environmental Impact Statement or a Finding of No Significant Impact will be prepared for the proposed project.

**PURPOSE AND NEED**

The need for this project is to enhance sediment removal capability of the Montoyas arroyo storm water facility utilizing "green" infrastructure by restoring hydrology and infiltration through design & implementation of low impact development techniques including low-water species of plants and site grading to reduce velocity and enhance infiltration of storm water and provide for the removal of sediment and debris prior to entering the Rio Grande River. The Harvey Jones Channel must continue to have capacity to pass storm water flows from the upper reaches of the watershed through the Village of Corrales to the Rio Grande. One of the primary issues that may interfere with this ability is the large volume of sediment that can become trapped within the channel near the outfall. Once sediment enters the Harvey Jones Channel, it can quickly degrade the hydraulic capacity of the channel to convey the storm water safely to the Rio Grande. SSCAFACA will utilize the Clean Water funding in conjunction with local funds to finance the construction of the project.

**PROJECT DESCRIPTION**

The proposed project is located in the northwest sector of the Village of Corrales and incorporates a combination of hardened elements, earth moving to provide volume for sediment settling, and vegetation to provide floatable solids capture capability.

The hardened elements are arranged to induce hydraulic jumps in the storm water flows, slowing the velocity of the water, and allowing for sediment settling. The earthwork is needed to provide a sediment retention volume sufficient to accommodate the volume of sediment generated by the 100-year storm event. Vegetation is integrated into several of the hardened structures as well to provide for areas that may receive storm water flows during higher volume events. The proposed project area is

approximately 36.36 acres in size.

## **ALTERNATIVES TO THE PROPOSED PROJECT**

The funding recipient evaluated and considered a range of various alternatives to address the infrastructure needs of the area. Important factors influencing the evaluation of the processes and their recommended solutions include environmental acceptability, overall costs, availability of land for the intended uses, maximum reuse of existing facilities when applicable, operation and maintenance costs, system reliability, accommodation of future expansion needs, and public acceptance. Adherence to local, state and Federal regulations is of prime importance and concern to the funding recipient. Alternatives considered included No Action, several options rejected from further consideration, and implementation of the proposed project. A complete description of the alternatives is provided in the Environmental Information Document developed and provided by the funding recipient for the project.

### **A. No Action:**

The NEPA environmental review process requires consideration of the “no action” alternative. This alternative will allow the current public health concerns and potential flooding issues to continue. The environmental consequences of taking “no action”, which would allow continued deterioration of the area, were compared with the benefits to be gained from the construction of the proposed project. Since taking “no action” is unresponsive to the current and future infrastructure needs of the funding recipient, and does not protect public health and environmental standards in the area, this alternative was **rejected** from further consideration in favor of implementing the proposed project.

### **B. Alternative B: In-channel water quality facility-green infrastructure/sediment reduction balance**

This alternative provides for an equivalent level of green infrastructure without comprising sediment removal. Sediment/infiltration basins are proposed in the upper area as well as the lower area of the arroyo providing 65,000 cubic yards of sediment removal.

The upper sediment/infiltration basin will take advantage of the natural oxbows for landscaping but also provide for sediment and debris removal. An equilibrium grade of the channel will be established to provide reduced velocity and a lengthened stretch of channel where sediment will be deposited in the curves. This allows the sediment transported in this area to be captured upstream of the native vegetation areas. A dry well is also proposed at the Dam #1 outfall into the Montoyas arroyo to promote groundwater recharge.

The lower segment consists of a braided channel on the upstream end of the arroyo with a sediment/infiltration basin just west of the Harvey Jones Channel inlet and installation of dry wells to promote groundwater recharge within the sediment/infiltration basin. The area is proposed to be separated from the Harvey Jones Channel by a naturalistic water quality structure utilizing inclined pipes for maximum sediment and debris removal capabilities.

This alternative is **preferred** due to the balance of landscaping areas, naturalistic features and efficient sediment removal capabilities.

### **C. Alternative C: In-channel water quality facility-emphasis on green infrastructure**

This is the most naturalistic in-channel treatment alternative, utilizing the natural oxbows along the arroyo for landscape areas and providing 55,000 cubic yards of sediment removal. One small sediment/infiltration basin is located within the upper area and a larger sediment/infiltration basin is located in the lower area just upstream of the Harvey Jones Channel inlet.

The upper segment consists of a combination of natural channel treatment, a small sediment/infiltration basin and a braided channel. At the upstream end of the property, a drop structure is proposed, followed by a naturalistic channel with depressed landscape areas in natural oxbows. Storm water would pass through a backwater structure and flow downstream to a small sediment/infiltration basin to remove sediment and debris. A braided channel is proposed at the downstream end of the upper

property boundary. An equilibrium grade will be established utilizing drop structures to provide reduced velocity and a lengthened stretch of channel where sediment will be deposited in the curves. This will allow the sediment transported through this area to be stabilized and provide opportunities for native vegetation establishment in the oxbow areas. In addition, storm water runoff will be collected from adjacent surrounding areas and convey it to the landscape areas via grouted boulder/shotcrete rundowns to take advantage of storm water for irrigation. Vegetation also provides pollutant removal functions by reducing flow velocities, increasing deposition and infiltration, and providing nutrient uptake and organic matter for pollutant transformation. The tiered profile grade allows the design to conform closer to existing topography and minimize the earth moving required for the project. Dry wells are proposed within the landscape area located at the Dam #1 outlet to promote infiltration and groundwater recharge.

The lower segment of this alternative consists of a braided channel on the upstream end of the property with a sediment/infiltration basin just west of the Harvey Jones Channel inlet. The braided channel provides an opportunity to add arid riparian areas with natural grasses and other native vegetation on islands separating the braided channel flow paths. The vegetation can provide additional water quality treatment and erosion control opportunities on the banks of the arroyo. A sediment/infiltration basin with dry wells to promote groundwater recharge is proposed at the throat of the Harvey Jones Channel inlet. The area is proposed to be separated from the Harvey Jones Channel by a naturalistic water quality structure utilizing inclined pipes for maximum sediment and debris removal capabilities.

This alternative was **rejected** because it provides the least amount of sediment removal.

#### **D. Alternative D: In-channel water quality facility-emphasis on sediment reduction**

This alternative provides for the most sediment removal capabilities, with a large sediment/infiltration basin in the upper area as well as the lower area providing 75,000 cubic yards of sediment removal. Due to the large area required for sediment removal, this alternative has the least opportunity for landscaping but provides the maximum amount of sediment removal.

The upper segment consists of a sediment/infiltration basin utilizing the largest area of the site for maximum sediment removal with a water quality structure at the downstream end. The water quality structure would be designed to remove approximately 35,000 cubic yards of sediment and release the design flow of 4,163 cubic feet/second (cfs) over a weir. Storm water would be held in the basin for up to 96 hours to promote infiltration and ground water recharge. Two drop structures would be installed upstream of the basin separated by a braided channel with another drop structure at the downstream end of the upper area for grade control requiring the largest modification of the existing terrain.

Similar to alternative B, the lower segment consists of a braided channel on the upstream end of the arroyo with a sediment/infiltration basin just west of the Harvey Jones Channel inlet. The primary difference would be a drop structure located at the upstream end of the property in order to establish the equilibrium grade between the upper and lower boundaries of the project. To promote groundwater recharge at the throat of the Harvey Jones Channel inlet, a sediment/infiltration basin with two dry wells would be installed. The area is proposed to be separated from the Harvey Jones Channel by a naturalistic water quality structure utilizing inclined pipes for maximum sediment and debris removal capabilities

This alternative was **rejected** due to the large area required for sediment removal and the least opportunity for landscaping.

#### **E. Alternative E: Traditional dam structure**

This alternative is to place an embankment across the lower project area that would serve as a traditional dam structure. In addition to an embankment, a principal spillway and emergency spillway would be constructed. The estimated volume of sediment desired to be retained before storm water enters the Harvey Jones Channel is 55,000 cubic yards, equating to 34.1 acre-feet of sediment. Considering the need to maintain dam pool capacity beyond the sediment storage, a dam with a flood pool in excess of 50 acre-feet is likely, making the facility a jurisdictional dam per New Mexico State Engineer requirements.

This alternative was **rejected** due to the large footprint necessary to accommodate the volume of water seen during the 100-year storm event thereby requiring the acquisition of additional right of way and the estimated cost exceeding the amount of available funding.

## **ENVIRONMENTAL SETTING**

The project area lies within the Mexican Highland Section of the Basin and Range Physiographic Province. The area is part of the Albuquerque Basin of Central New Mexico. It is transected by the Arroyo de los Montoyas, one of several substantial arroyos draining to the Rio Grande. The project area has an arid, continental climate characterized by low rainfall, warm summers, and mild winters. The average elevation is approximately 5,205 feet above mean sea level.

The project area occurs adjacent within a disturbed Plains Mesa Sand Scrub vegetation community in which most of the area is stripped of vegetation. Within vegetated areas, the dominant plant species present are sand sage, four-wing saltbush, rabbit brush, yucca, broom dalea, and snakeweed.

According to 2010 Census, Sandoval County had a population of 131,561 with 35.1% of the population considered Hispanic and 64.9% considered Not Hispanic/White or other. The Village of Corrales had a 2010 Census population of 8,329 with 27% considered Hispanic and 73% considered Not Hispanic/White or other.

## **IMPACTS OF THE PROPOSED PROJECT**

The proposed project was analyzed to identify potential short-term, long-term, and cumulative impacts on the environment. Factors that were considered include the probability of impact occurrence, magnitude of any occurrence, if any predicted occurrence is determined to be reversible/irreversible, direct/indirect or one-time/cumulative, the proposed action's conformity to legal mandates, and the social distribution of risks and benefits. The proposed project should not have a substantial negative impact upon current land uses or land values, nor should it have a substantial impact upon the values of surrounding land holdings. The proposed action is expected to have energy requirements typical of other construction projects of similar scope, size and duration, and will be conducted in accordance with the requirements of all local and state regulations.

The majority of the impacts associated with the proposed project will be short-term and temporary due to actual construction activities, and will cease immediately upon completion of construction work in any particular area. There are no significant adverse environmental impacts associated with the proposed action that cannot be reduced to acceptable levels. The only irretrievable resources committed to this project are labor, machinery wear, materials, funds spent, and energy consumed during construction. The potential short and long-term, direct, indirect and cumulative impacts resulting from the proposed action are identified and discussed below.

1. Biological Resources Including Threatened and Endangered Species: The proposed project was coordinated with the United States Fish and Wildlife Service and the New Mexico Department of Game and Fish concerning the protection of listed animal and plant species and their designated critical habitat. Since these protected resources are not known to occur in the project area, federally listed species or their habitats will not be adversely impacted by construction of the project.

However, the western burrowing owl, bank swallows, and the silvery minnow are species of concern considered viable for occurrence in the Montoyas Arroyo. The proposed mitigation measures to minimize any environmental impact are:

- Require the contractor to develop and implement a sediment and erosion control plan to prevent surface water quality and turbidity impacts. Disturbed upland areas should be re-vegetated to reduce surface erosion.
- Require that equipment refueling, storage, and maintenance activities occur in designated areas outside of the Arroyo de los Montoyas floodplain.

- Clean all heavy equipment used in the project area prior to the start of the project and inspect all equipment daily for leaks. Leaking equipment must not be used in or near any watercourse.
- Report any spills immediately to the USACE, USFWS, NMDGF, and the Surface Water Quality Bureau of the NMED.
- Replant open disturbed areas with native vegetation.
- Avoid (if possible) the probable bank swallow colonial nest site in the project area upper segment.
- Construct (if possible) outside the nesting season for the Albuquerque area (March 1 to September 15). If construction is delayed beyond the next nesting season but may occur within future nesting seasons, additional migratory bird surveys to prevent impacts would be recommended.
- Inspect all suitable burrows for use by western burrowing owl in the project area prior to construction. This provision would extend into the winter months as a small number of western burrowing owls overwinter in the Central Rio Grande Valley.

2. Cultural/Historic Resources: The proposed project was coordinated with the State Historic preservation Officer (SHPO) as required under Section 106 of the National Historic Preservation Act (NHPA) concerning the protection of sensitive resources with archaeological, historical, architectural, or cultural significance. Since these protected resources are not known to occur in the project area, cultural or historic resources will not be adversely impacted by construction of the project. A good faith effort of tribal consultation indicates that no impacts will occur.

However, should materials, artifacts or properties of a potentially historic or archaeological nature be unearthed during construction, work will stop immediately in that general vicinity, and the funding recipient will immediately notify the SHPO of the discovery. Any such resources discovered will be evaluated in accordance with the requirements of 36 CFR Part 800. Appropriate mitigation measures will be developed and implemented, as needed, in consultation with the SHPO before construction is allowed to continue.

3. Floodplains: The proposed project was coordinated with the local Floodplain Administrator and the Federal Emergency Management Agency concerning the protection of the floodplain, and compliance with local floodplain management regulations. Most of the project area is currently located within the Special Flood Hazard area (Zone AE) by the Flood Insurance Rate Map. Zone AE is subject to inundation by the 1-percent annual chance flood event. Base elevations or depths are not known. The local floodplain administrator for the Village of Corrales did not have any comments on the proposed project and concurred with SSCAFCA's determination that construction will be compatible with the floodplain areas and will not encroach on the floodway such that flood heights are substantially elevated.

4. Wetlands: The proposed project was coordinated with the United States Army Corps of Engineers concerning the protection of jurisdictional wetlands. Since these protected resources are known to occur in the project area, the project will require the issuance of a Section 404 permit prior to construction. The funding recipient must abide by all requirements of the permit to insure that wetlands in the area will not be adversely impacted by construction of the project.

Temporary and permanent soil erosion control measures will be implemented in accordance with the NPDES storm-water permit process, and a Storm Water Pollution Prevention Plan (SWPPP) will be developed using Best Management Practices (BMPs). These BMPs will include dust suppression and soil stabilization measures that would minimize erosion and storm water pollution during construction.

5. Surface Water Resources: The proposed project was coordinated both the National Park Service and the New Mexico Environment Department Surface Water Quality Bureau concerning the protection of surface water resources. The Surface Water Bureau responded that a Section 401 permit is required for activities regulated under Section 404 of the Clean Water Act. The project will occur within an ephemeral waterway, the Arroyo de los Montoyas. A storm water pollution prevention plan will be prepared for the site and appropriate best management practices will be implemented and maintained during and after construction to prevent, to the extent practicable, pollutants in storm water runoff from entering water of the United States.

6. Ground Water Resources: The proposed project was coordinated with the New Mexico Environment Department Ground Water Quality Bureau concerning the protection of ground water resources for compliance with the New Mexico Environment Department (NMED) groundwater discharge and effluent reuse requirements. No groundwater discharges or disposal activity would occur at the project area. Since the project is not located over ground water resources that have been designated as a sole source aquifer, ground water resources will not be adversely impacted by construction of the project.

7. Prime and Unique Farmlands: The proposed project was coordinated with the Natural Resources Conservation Service concerning the protection of prime and/or unique farmlands. Since these protected resources are not known to occur in the project area, prime and/or unique farmlands will not be adversely impacted by construction of the project.

8. Air Quality: The project was coordinated with the New Mexico Environment Department Air Quality Bureau concerning the protection of air quality. The proposed project is located in an attainment area which is in compliance with the National Ambient Air Quality Standards (NAAQS) for all criteria air pollutants. All vehicles and equipment used in the construction of this project must comply with the regulations concerning control of air pollution from mobile sources. Since the project will not violate NAAQS, air quality will not be adversely impacted by construction of the project.

9. Environmental Justice: The proposed project was reviewed for compliance with Executive Order 12898 entitled "Federal Actions to Address Environmental Justice (EJ) in Economically Stressed Populations". Potential environmental impacts to economically stressed communities were evaluated using Geographical Information System maps, census demographic data, and a mathematical formula to rank the project for EJ impacts. The project will serve all populations equally and will be constructed in a manner to ensure that no persons or populations will be discriminated against or denied the benefits of the project. There will be no adverse impacts that are considered disproportionate to any particular population(s). The results of the EJ analysis are shown in the enclosed figures 2-7. These figures result in a ranking scale of one to one hundred that indicates the potential for economically stressed. A ranking below thirteen indicates a low possibility of economically stressed while a ranking above fifty indicates a high probability of economically stressed.

10. Coastal and Barrier Resource: Since the entire state of New Mexico is inland and not adjacent to any coastal location, construction of the proposed project should not have significant adverse impacts to coastal and barrier resources.

11. Cumulative Impacts: Potential cumulative impacts would be those impacts to the local environment that would result from the proposed project in combination with other ongoing actions, and those reasonably foreseeable future actions. No other major construction activity is being conducted presently or planned for the immediate future. The proposed project will not individually nor cumulatively over time have a negative impact on the quality of the human or natural environment. To the contrary, the proposed project will have a positive environmental effect by enhancing public health, safety, and water quality.

#### **DOCUMENTATION, COORDINATION, AND PUBLIC PARTICIPATION**

A public hearing for the proposed project was held on June 12, 2014 6:30 PM, at the Corrales Village Hall located at 4324 Corrales Road, Corrales, NM. The purpose of the meeting was to inform the public of the proposed project, to identify any issues of concern, and to request public participation in the development of the project. One member of the public was in attendance where no significant issues of concern were identified. Subsequent to the public hearing, comments were received from the Village of Corrales administration via email in reference to enforcement of the prohibition of traffic in the arroyo, fencing around the facility, and operation of the facility post-construction. Responses were transmitted to all recipients of the original email.

During the process of conducting the environmental review and preparing this Environmental Assessment for the project, coordination has been conducted with all required resource protection agencies and offices to solicit and incorporate their initial review and comments, if any. Copies of this Environmental Assessment will be provided to those agencies and offices for their final review and comments, if any. Other interested parties may request a copy of the Environmental Assessment in writing from the New Mexico Environment Department Construction Programs Bureau, 5500 San Antonio

Drive, Albuquerque, NM 87109.

#### References

1. Preliminary Engineering Report, Southern Sandoval County Arroyo Flood Control Authority, January 2014
2. Environmental Information Document, Marron & Associates, July 2014

#### **RECOMMENDATION**

Based upon completion of this Environmental Assessment, and a detailed review of the supporting information contained in the Environmental Information Document, the Public Hearing Responsiveness Summary and the Preliminary Engineering Report which were prepared for the project, and other pertinent technical, engineering and administrative documentation, the proposed project is considered to be cost-effective and environmentally sound. Therefore, it is recommended that a Finding of No Significant Impact be issued for this project.

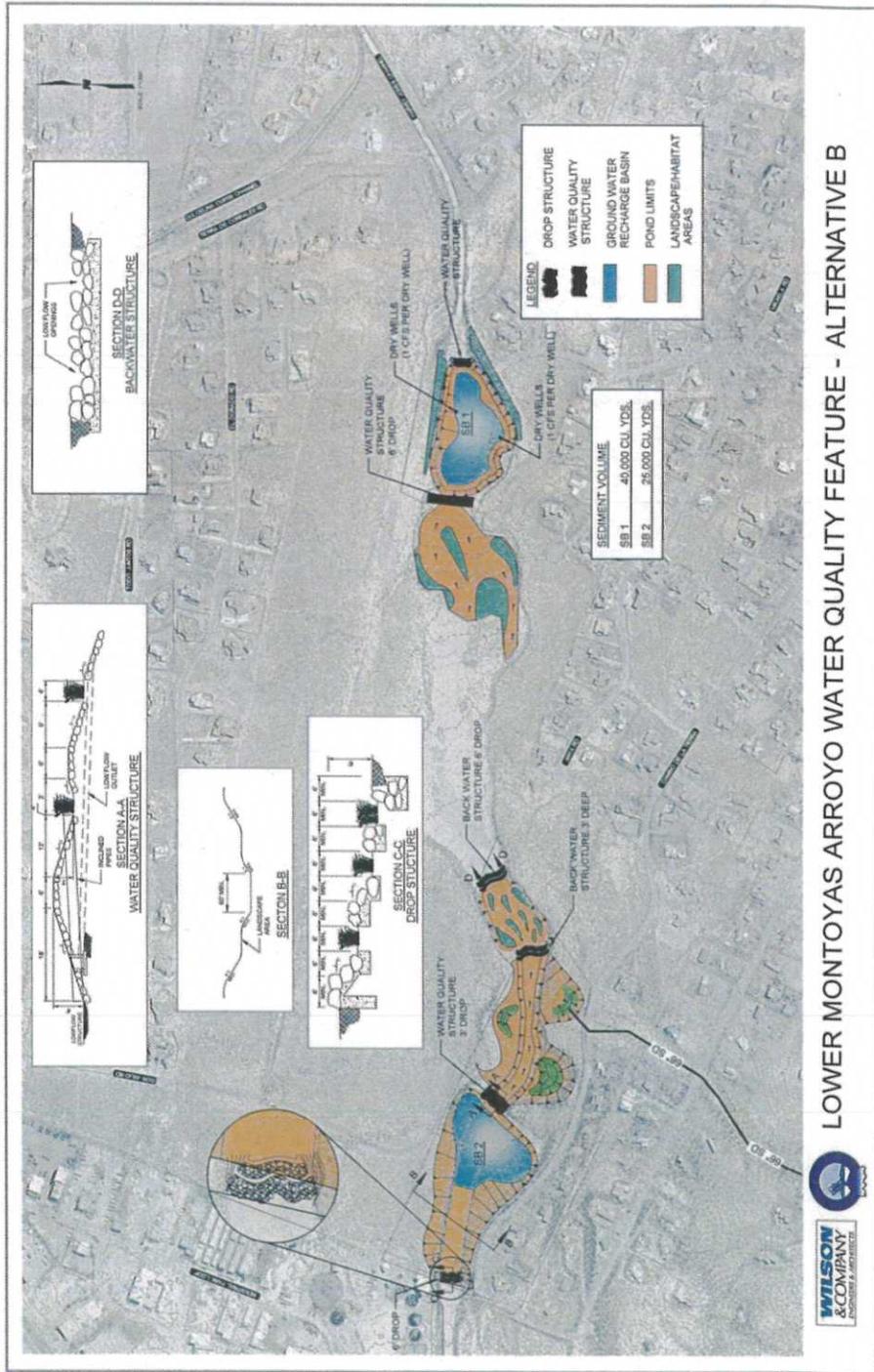


Figure 1 – Map of Alternative B

Lower Montoyas Arroyo Water Quality Project

Southern Sandoval County Arroyo Flood Control Authority Montoyas Arroyo Improvements

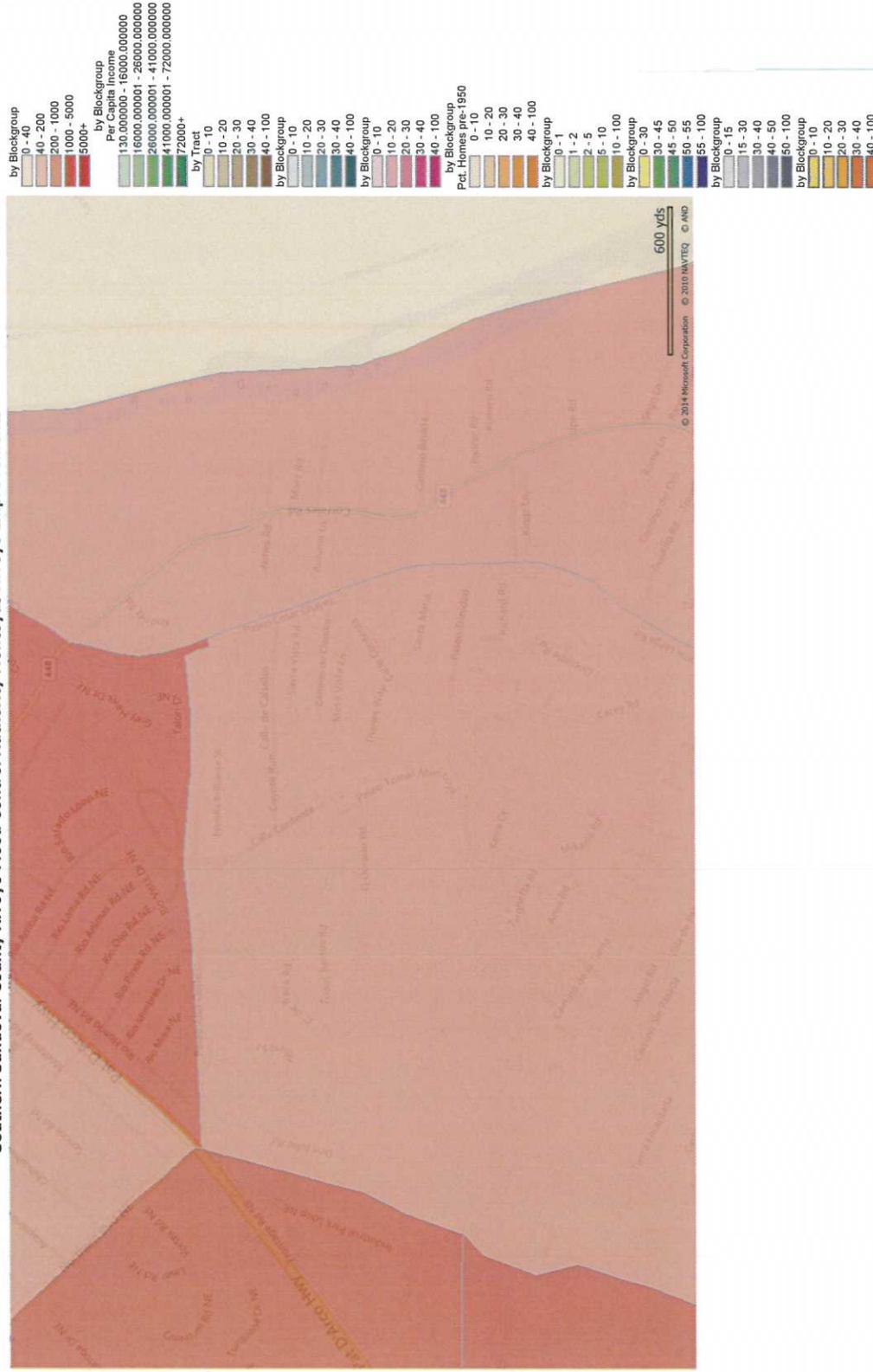


Figure 2



# EJView Environmental Report



Location: -106.615534,35.257465

Study Area: 4 miles around the point location

Sites and Facilities	Count
Air Facility System (AFS)	28
Superfund Sites (NPL)	0
Toxic Releases (TRI)	5
Hazardous Waste (RCRAInfo)	53
Water Dischargers (PCS & ICIS)	32
Brownfields (ACRES)	1
Radiation Information Database (RADInfo)	0
Toxic Substances Control Act (TSCA)	1

Environmental Concerns	Count
National Water Information System (NWIS) sites	0
STOrage and RETrieval (STORET) sites	43
Impaired Streams	7
Impaired Waterbodies	0
National Parks	0

Places	Count
Schools	8
Hospitals	0
Worship Places	29

Data Note: Detail may not sum to totals due to rounding.

Source: Sites and facilities, EPA Envirofacts; NWIS, USGS; STORET, EPA; impaired streams and waterbodies, EPA NHD Plus; national parks, USGS National Atlas; schools, hospitals, and worship places; USGS GNIS.

Figure 3



## EJView ACS Summary Report



Location: -106.615534,35.257465

Study Area: 4 miles around the point location

Summary of ACS Estimates	2006 - 2010
Population	46,066
Population Density (per sq. mile)	692
Minority Population	18,319
% Minority	40%
Households	18,137
Housing Units	19,687
Housing Units Built Before 1950	325
Per Capita Income	30,829
Land Area (sq. miles) (Source: SF1)	66.54
% Land Area	99%
Water Area (sq. miles) (Source: SF1)	0.68
% Water Area	1%

	2006 - 2010 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	46,066	100%	515
Population Reporting One Race	44,907	97%	1,590
White	38,011	83%	532
Black	1,422	3%	265
American Indian	1,425	3%	224
Asian	610	1%	137
Pacific Islander	44	0%	127
Some Other Race	3,394	7%	305
Population Reporting Two or More Races	1,159	3%	128
Total Hispanic Population	14,355	31%	434
Total Non-Hispanic Population	31,711		
White Alone	27,747	60%	474
Black Alone	1,383	3%	265
American Indian Alone	1,164	3%	190
Non-Hispanic Asian Alone	603	1%	137
Pacific Islander Alone	17	0%	127
Other Race Alone	14	0%	127
Two or More Races Alone	783	2%	128
<b>Population by Sex</b>			
Male	22,147	48%	313
Female	23,919	52%	341
<b>Population by Age</b>			
Age 0-4	2,200	5%	157
Age 0-17	10,242	22%	269
Age 18+	35,824	78%	349
Age 65+	7,037	15%	206

Data Note: Detail may not sum to totals dues to rounding. Hispanic population can be of any race. N/A means not available.  
 Source: U.S. Census Bureau, American Community Survey (ACS) 2006 - 2010.

Figure 4



# EJView ACS Summary Report



Location: -106.615534,35.257465

Study Area: 4 miles around the point location

	2006 - 2010 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	32,177	100%	329
Less than 9th Grade	713	2%	177
9th - 12th Grade, No Diploma	1,362	4%	173
High School Graduate	7,785	24%	157
Some College, No Degree	10,863	34%	190
Associate Degree	2,729	8%	149
Bachelor's Degree or more	11,454	36%	215
<b>POPULATION AGE 5+ YEARS BY ABILITY TO SPEAK ENGLISH</b>			
Total	43,866	100%	487
Speak only English	36,028	82%	411
Non-English at Home <sup>1+2+3+4</sup>	7,837	18%	328
<sup>1</sup> Speak English "very well"	6,264	14%	275
<sup>2</sup> Speak English "well"	1,092	2%	243
<sup>3</sup> Speak English "not well"	328	1%	163
<sup>4</sup> Speak English "not at all"	153	0%	175
<sup>3+4</sup> Speak English "less than well"	482	1%	195
<sup>2+3+4</sup> Speak English "less than very well"	1,573	4%	285
<b>POPULATION AGE 5+ YEARS BY LANGUAGE SPOKEN AT HOME</b>			
Total	N/A	N/A	N/A
Speak only English	N/A	N/A	N/A
Non-English Speaking	N/A	N/A	N/A
<b>Population by Place of Birth for the Foreign-Born</b>			
Total	N/A	N/A	N/A
Europe	N/A	N/A	N/A
Asia	N/A	N/A	N/A
Africa	N/A	N/A	N/A
Oceania	N/A	N/A	N/A
Americas	N/A	N/A	N/A
<b>Households by Household Income in 1999</b>			
Household Income Base	18,137	100%	162
< \$15,000	1,556	9%	130
\$15,000 - \$25,000	1,609	9%	132
\$25,000 - \$50,000	3,778	21%	169
\$50,000 - \$75,000	3,750	21%	153
\$75,000 +	7,444	41%	183
<b>Occupied Housing Units by Tenure</b>			
Total	18,137	100%	162
Owner Occupied	14,206	78%	134
Renter Occupied	3,931	22%	165

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.

**2006-2010 ACS 5-year Estimates:** The American Community Survey (ACS) summary files provide nation-wide population and housing characteristic data at all Census summary levels down to the Block Group level. This data was collected between January 1, 2006 and December 31, 2010. ACS replaces the decennial census sample data, and is not the 2010 Census population counts data. (<http://www.census.gov/acs/www/#fragment-3>)

**Margin of error (MOE):** The MOE provides a measure of the uncertainty in the estimate due to sampling error in the ACS survey. Applying the MOE value yields the confidence interval for the estimate. For example, an estimate value of 50 and +/- MOE of 5 means the true value is between 45 and 55 with a 90 percent certainty ([http://www.census.gov/acs/www/Downloads/data\\_documentation/Accuracy/MultiyearACSAccuracyofData2010.pdf](http://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/MultiyearACSAccuracyofData2010.pdf)). Maximum MOE is shown for each value within study area.

**Source:** U.S. Census Bureau, American Community Survey (ACS) 2006 - 2010.



# EJView Census 2000 Summary Report



Location: -106.615534,35.257465  
 Study Area: 4 miles around the point location

Summary	Census 2000
Population	37,883
Population Density (per sq. mile)	540
Minority Population	12,984
% Minority	34%
Households	14,598
Housing Units	15,600
Housing Units Built Before 1950	357
Land Area (m <sup>2</sup> )	181,551,867
% Land Area	99%
Water Area (m <sup>2</sup> )	1,904,778
% Water Area	1%

Population by Race	Number	Percent
Total	37,883	-----
Population Reporting One Race	36,418	96%
White	30,340	80%
Black	576	2%
American Indian	1,185	3%
Asian	443	1%
Pacific Islander	42	0%
Some Other Race	3,832	10%
Population Reporting Two or More Races	1,465	4%
Total Hispanic Population	10,011	26%

Population by Sex	Number	Percent
Male	18,211	48%
Female	19,672	52%

Population by Age	Number	Percent
Age 0-4	2,677	7%
Age 0-17	9,858	26%
Age 18+	28,025	74%
Age 65+	5,540	15%

Population by Place of Birth for the Foreign-Born	Number	Percent
Total	N/A	-----
Europe	N/A	N/A
Asia	N/A	N/A
Africa	N/A	N/A
Americas	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.  
 Source: U.S. Census Bureau, Census 2000 Summary File 3.

Figure 5



## EJView Census 2000 Summary Report



Location: -106.615534,35.257465

Study Area: 4 miles around the point location

Population 25+ by Educational Attainment	Number	Percent
Total	25,669	-----
Less than 9th Grade	566	2%
9th - 12th Grade, No Diploma	1,724	7%
High School Graduate	6,470	25%
Some College, No Degree	6,449	25%
Associate Degree	2,086	8%
Bachelor's Degree or more	8,374	33%

Population Age 5+ Years by Ability to Speak English	Number	Percent
Total	35,709	-----
Speak only English	29,573	83%
Non-English at Home	6,136	17%
Speak English "very well"	4,820	13%
Speak English "well"	882	2%
Speak English "not well"	409	1%
Speak English "not at all"	25	0%
Speak English "less than well"	434	1%

Households by Household Income in 1999	Number	Percent
Household Income Base	14,598	-----
< \$15,000	1,265	9%
\$15,000 - \$25,000	1,588	11%
\$25,000 - \$50,000	4,350	30%
\$50,000 - \$75,000	3,515	24%
\$75,000 +	3,879	27%

Households by Tenure	Number	Percent
Total	14,598	-----
Owner Occupied	11,423	78%
Renter Occupied	3,175	22%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

Source: U.S. Census Bureau, Census 2000 Summary File 3.



## EJView Census 2010 Summary Report



Location: -106.615534,35.257465

Study Area: 4 miles around the point location

Summary	Census 2010
Population	46,848
Population Density (per sq. mile)	704
Minority Population	18,749
% Minority	40%
Households	18,949
Housing Units	20,274
Land Area (m <sup>2</sup> )	172,345,593
% Land Area	99%
Water Area (m <sup>2</sup> )	1,759,268
% Water Area	1%

Population by Race	Number	Percent
Total	46,848	-----
Population Reporting One Race	45,014	96%
White	37,644	80%
Black	1,043	2%
American Indian	1,424	3%
Asian	756	2%
Pacific Islander	58	0%
Some Other Race	4,089	9%
Population Reporting Two or More Races	1,834	4%
Total Hispanic Population	14,937	32%
Total Non-Hispanic Population	31,911	68%
White Alone	28,099	60%
Black Alone	944	2%
American Indian Alone	1,116	2%
Non-Hispanic Asian Alone	707	2%
Pacific Islander Alone	52	0%
Other Race Alone	121	0%
Two or More Races Alone	872	2%

Population by Sex	Number	Percent
Male	22,495	48%
Female	24,353	52%

Population by Age	Number	Percent
Age 0-4	2,427	5%
Age 0-17	10,389	22%
Age 18+	36,459	78%
Age 65+	7,843	17%

Households by Tenure	Number	Percent
Total	18,949	
Owner Occupied	14,702	78%
Renter Occupied	4,247	22%

Data Note: Detail may not sum to totals dues to rounding. Hispanic population can be of any race.  
 Source: U.S. Census Bureau, Census 2010 Summary File 1.

Figure 6

## Health Statistics

### Health Service Area for Bernalillo (Albuquerque), NM - Valencia, NM

The health data statistics for this feature of the Environmental Justice Assessment are provided by the National Center for Health Statistics (NCHS) Centers for Disease Control (CDC) [\[EXIT Disclaimer\]](#), the official source for vital statistics. Currently, this information has not been released for all ethnic groups by NCHS. When the health statistics are released, they will be provided in this feature broken down by geographic area and ethnicity. This information will be made available as soon as the data have been quality assured and released by NCHS in their entirety.

Since 1960, NCHS has received several legislative mandates and authorities, and it works closely with other federal agencies, as well as researchers and academic institutions, to provide health information. NCHS data systems include data on vital events, as well as information on health status, lifestyle and exposure to unhealthy influences, the onset and diagnosis of illness and disability, and the use of health care. This information is used by policymakers in Congress and the Administration, by medical researchers, and by others in the health community.

Additional information is available from the [National Center for Health Statistics \(NCHS\)](#) [\[EXIT Disclaimer\]](#) website.

Statistic\Disease †	Heart Disease	All Cancers	Chronic Obstructive Pulmonary Disease	Pneumonia and Influenza	Liver Disease
White Male Rate *	154.2	139.4	30.1	12.9	16.3
White Male Significance **	1	2	3	1	5
Black Male Rate *	164.4	156.8	28.3	21.3	3.4
Black Male Significance **	2	2	3	2	2
White Female Rate *	80	100.8	17.1	8.4	6.4
White Female Significance **	1	2	3	2	5
Black Female Rate *	85.4	116.9	9.3	1.1	10.7
Black Female Significance **	2	3	3	2	3

SOURCE: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Atlas of United States Mortality (1997) [\[EXIT Disclaimer\]](#)

† Rates based on deaths during 1988-92 in the United States due to the diseases listed.

\* Rate: The age-adjusted death rate due to cause per 100,000 population.

\*\* Significance: A description of whether the death rate of the group, due to cause, varies significantly from the U.S. death rate.

### 2005 NATA Risk Estimates

	Cancer Risk (Persons per Million)	Neurological Hazard Risk	Respiratory Hazard Risk
BERNALILLO, NM	37.3 (77.3 Percentile)	.04 (77.4 Percentile)	1.52 (84.6 Percentile)
SANDOVAL, NM	24.79 (33.7 Percentile)	.03 (56.4 Percentile)	.75 (55 Percentile)
New Mexico	27.84 (13.5 Percentile)	.03 (9.6 Percentile)	.89 (15.4 Percentile)

SOURCE: EPA Office of Air and Radiation (<http://www.epa.gov/ttn/atw/nata2005/>)

NOTES: Values are derived from 2005 National-Scale Air Toxics Assessment (NATA) Cancer Risk Estimates and Non-Cancer Hazard Index Scores. Percentiles are ranking of Counties and States from 0 (lowest) to 100 (highest).

### 2007 Asthma Prevalence By State

	White Non-Hispanic Persons	Black Non-Hispanic Persons	Multi-Racial Non-Hispanic Persons	Other Race Non-Hispanic Persons	Hispanic Persons
<b>New Mexico</b>					
Lifetime	15.3%	30.4%	8.7%	13.1%	11.8%
Current	9.9%	9.8%	6.2%	4.9%	7.7%

SOURCE: Centers for Disease Control and Prevention.  
 2007 Behavioral Risk Factor Surveillance System (BRFSS) (<http://www.cdc.gov/asthma/brfss/07/brfssdata.htm>)

**2008 Mortality Rates**

	Deaths per 1000
BERNALILLO, NM	7.74
SANDOVAL, NM	6.25
<b>New Mexico</b>	<b>7.84</b>

SOURCE: US Census Bureau <http://www.census.gov/popest/>

NOTES: Mortality rates are calculated using 7/1/2007 to 7/1/2008 deaths and estimated populations from the file, "County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2008".

**Life Expectancy at Birth in 1999**

	Male and Female	Male	Female
Bernalillo, New Mexico	77.7	74.7	80.6
Sandoval, New Mexico	79	75.8	82.1

SOURCE: U.S. Census Bureau & National Center for Health Statistics

**All Cancers Mortality Rates**

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
BERNALILLO, NM	7.7866	4.738	185.8214	130.4128	238.3551	145.7876				
SANDOVAL, NM	3.4955	4.9174	158.6888	118.5029	136.2436	112.736				
<b>New Mexico</b>	<b>6.3915</b>	<b>4.906</b>	<b>176.2282</b>	<b>123.6238</b>	<b>232.7052</b>	<b>133.5843</b>	<b>5.3343</b>	<b>3.8159</b>	<b>4.0466</b>	<b>2.1414</b>

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs <http://ratecalc.cancer.gov/ratecalc/archivedatlas/>

NOTES: Mortality rates (number per 100,000) are extracted from the state and county mortality tables.

**Childhood Leukemia Mortality Rates**

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
BERNALILLO, NM	3.6472	2.2276	8.4279	4.8666	8.0361	2.8961				
SANDOVAL,										

NM	1.7245	1.5999	7.3269	4.7813	13.8734	0				
New Mexico	2.7781	2.2246	7.9332	4.7406	7.1348	1.8582	2.1673	1.595	0	2.1414

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs <http://ratecalc.cancer.gov/ratecalc/archivedatlas/>

NOTES: Mortality rates (number per 100,000) are extracted from the state and county Leukemia mortality tables.

#### Adult Lymphoma Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 20 - 49 Age 50 - 74 Age 75+	White Female Age 20 - 49 Age 50 - 74 Age 75+	All White Male	All White Female	All Black Male	All Black Female	White Male Age 20 - 49 Age 50 - 74 Age 75+	White Female Age 20 - 49 Age 50 - 74 Age 75+	Black Male Age 20 - 49 Age 50 - 74 Age 75+	Black Female Age 20 - 49 Age 50 - 74 Age 75+
BERNALILLO, NM	1.9159 14.6073 43.3685	1.0176 10.6392 41.8341	5.9664	4.541	6.843	.5645				
SANDOVAL, NM	.4964 12.7254 50.8879	.4639 3.155 22.114	4.8975	2.1297	0	8.58				
New Mexico	1.7706 13.014 38.6452	.9276 9.7311 34.1661	5.5021	3.978	5.3146	3.6743	1.9204 13.7231 45.4862	.9477 10.506 36.919	0 21.4833 15.0658	1.6494 12.6926 11.2438

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs <http://ratecalc.cancer.gov/ratecalc/archivedatlas/>

NOTES: Mortality rates (number per 100,000) are extracted from the state and county Non-Hodgkin's Lymphoma mortality tables.

#### Lung Cancers Mortality Rates

	1950 - 1994		1970 - 1994							
	White Male Age 0 - 19	White Female Age 0 - 19	All White Male	All White Female	All Black Male	All Black Female	White Male Age 0 - 19	White Female Age 0 - 19	Black Male Age 0 - 19	Black Female Age 0 - 19
BERNALILLO, NM	0	.0401	49.6064	20.0436	60.1121	18.617				
SANDOVAL, NM	0	0	44.1034	21.5634	64.1723	30.3				
New Mexico	.0242	.0558	49.4622	20.1564	69.9306	19.8963	.0202	.0782	0	0

SOURCE: National Cancer Institute Cancer Mortality Maps & Graphs <http://ratecalc.cancer.gov/ratecalc/archivedatlas/>

NOTES: Mortality rates (number per 100,000) are extracted from the state and county mortality tables.