



Chaparral Drainage Master Plan

May 16, 2008

Prepared By:

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The Exhibits annotated above with an asterisk () are comprised of two versions. The one appended with an "A" is black and white (11"x17"), and the one appended with a "B" is color (22"x34"). Exhibits not annotated with an asterisk are the "A" version only, and the text of this report references the exhibits without distinguishing which version.*



Acronyms and Abbreviations

Throughout this document, several acronyms and abbreviations are used as defined below:

ASCII	American Standard Code for Information Exchange
BLM	Bureau of Land Management
CBC	Concrete Box Culvert
cfs	cubic feet per second
DFIRM	Digital Flood Insurance Rate Map
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
fps	feet per second
GIS	Geographic Information System
HEC-HMS	Hydraulic Engineering Circular - Hydraulic Modeling System
LIDAR	Light Detection and Ranging
LWC	Low Water Crossing
MSA	Metropolitan Statistical Area
n/a	not applicable
NFIP	National Flood Insurance Program
NM SLO	New Mexico State Land Office
NOAA	National Oceanic and Atmospheric Agency
NRCS	National Resource and Conservation Service (formerly SCS)
SCS	Soil Conservation Service (currently NRCS)
USGS	United States Geologic Survey



Executive Summary

The unincorporated community of Chaparral is located in southeastern Doña Ana County, west of the Franklin Mountains, immediately north of El Paso Texas. The community is a recognized colonia with typical rural nature consisting of low density residential development, local businesses and community services. Chaparral is currently within tier "E" (the lower end on a scale of "A"; through "E") of the Doña Ana County Colonias Initiative indicating that a low level of public infrastructure currently exists in the community. Open space surrounds the community with much of the adjacent property under the jurisdiction of the Bureau of Land Management (BLM), the New Mexico State Land Office (NM SLO) and McGregor Range.

The community has a long history of flooding issues as depicted on the effective Flood Insurance Rate Maps (FIRMs) with watershed basins extending from the peaks of the Franklin Mountains through the foothills with the storm water eventually retained in localized playas; these drainage basins total over 65 square miles in area. This Drainage Master Plan is intended to provide an overall plan for implementation of capital improvements and administrative controls to reduce the flood risk in Chaparral.

Hydrologically and hydraulically, these components of the existing drainage system are connected in a way that results in three separate subsystems within the community:

- 1.** North System that includes Streams 1 and 20, plus Playas 1 and 2.
- 2.** Central System that includes Streams 2 and 3 discharging to Playa 3, which releases flows to Stream 4 and eventually Quirke Lake, plus Streams 7, 8, 9 and 10, all of which discharge into Quirke Lake.
- 3.** South System that includes several previously unidentified and unnumbered streams discharging into Playa 5 (Paloma Pond) and Playa 6 (Hermosa Pond). Schematically, the three drainage systems are shown in Exhibit 9.

Through analyses of the 100-year storm event for proposed improvements, consideration should be given to a series of engineered channels (earthen with drop structures) to reduce the width of stream flows through the community, localized berms to detain and/or direct the flow of storm water, and increasing the capacity of existing retention facilities (both engineered ponds and playas). A summary of the proposed improvements follows.



	NORTH SYSTEM	CENTRAL SYSTEM	SOUTH SYSTEM
Number of Proposed Engineered Channels	3	4	5
Number of Proposed Engineered Berms	1	2	1
Number of Proposed Changes to Retention Facilities	0	1	2
Number of Acres of Land Removed from Floodprone Area with Proposed Improvements	350	690	440
Number of Parcels of Land Removed from Floodprone Area with Proposed Improvements	226	296	281
Number of Structures Removed from Floodprone Area with Proposed Improvements	167	380	1,147
Estimated Cost (Construction plus Non-Construction), millions, 2007 ¹	\$9.9-\$17.2	\$13.7 – \$15.2	\$6.4 – \$8.5

¹ The range of costs given is dependent on the final configuration of roadway crossings of the channels (low water crossings or culverts).



Introduction

The community of Chaparral, located in southwest Doña Ana County, is one of the largest unincorporated communities in New Mexico. The rural character of the community is enveloped by open land due to the adjacent Franklin Mountains, White Sands Missile Range, and lands under the jurisdiction of the Bureau of Land Management (BLM) and New Mexico State Land Office (NM SLO).

The Doña Ana County Health and Human Services Department describes the community:

Chaparral (Spanish for “roadrunner”) has its roots in the 1920s as a rural ranching community. In addition to its more recent residential growth by urban city workers and the contributions of the local military base, the community has come to be home to a vast area of residents. From elderly citizens looking for a quiet rural community to retire in to young adults who wish to settle down and start a family, the community is home to several distinct groups of people.²

Chaparral is a recognized “colonia” which is described by the Doña Ana County Health and Human Services Department as:

The rural communities often found in New Mexico’s deserts are the product of a complex set of circumstances concerning the economy, immigration, subdivision law, codes enforcement, public infrastructure, and public health. Some of the communities have ties with colonies established by Spanish conquistadores and Spanish land grants. Others have developed more recently and depend on modern technology to extract water from aquifers deep in the earth. These rural developments are often bedroom communities that are dependent on local metropolitan statistic areas (MSAs) for government services and jobs. The fact that the nineteenth century historic communities also take advantage of modern technology means that they are generally quite similar to those that may have developed more recently. Doña Ana County now contains about 37 of these desert communities, all of which have a unique background which has contributed to their presently diverse characteristics; the communities are commonly referred to as colonias.

With regard to what is often an extensive history behind the communities, the word “colonia” is a relatively new term. It was first used in a 1977 document from the Lyndon B. Johnson School of Public Affairs. The word has since become the most common way to refer to the rural communities and has become a matter of federal concern. The United States Department of Housing and Urban Development (HUD) and the federal government define a colonia as a community that “(1) is in the state of Arizona, California, New Mexico, or Texas; (2) is within 150 miles of the U.S.-Mexico border, except for any metropolitan area exceeding one million people; (3) on the basis of objective criteria, lacks adequate sewage systems and lacks decent, safe, and sanitary housing and (4) was in existence as a colonia before November 29, 1990 (USC § 1479(F)(8)(1994).³

² http://www.co.dona-ana.nm.us/health/supp_info/index.php?page=9#Chaparral

³ <http://www.co.dona-ana.nm.us/health/colonias/>



Doña Ana County currently supports a colonias initiative which includes ranking of the infrastructure of each colonia; this ranking is for various components from a scale of 1 (minimal to no infrastructure) to 5 (majority of community has access to infrastructure component). Currently, infrastructure for Chaparral is ranked as follows:

- Roadways Paved – 4 (as at least 50% to 59% of roadways paved)
- Drainage System – 4 (significant standing water in roads, no impact to homes, significant impact to septic tank drain fields)
- Waste Water System – 4 (60% to 69% of the community has access to a public waste water system)
- Public Water System – 1 (community system has access to water rights, adequate wells and storage facilities)

From these individual rankings, a composite ranking of into tier “E” (scale of “A” to “E”) has been assigned to Chaparral indicating a low level of public infrastructure currently exists in the community.

The drainage characteristics in the community of Chaparral includes contributing runoff from the Franklin Mountains (including portions within the state of Texas), plus regional and localized playas that retain the runoff. Although some infrastructure has been developed in the community to divert and store runoff, the community continues to experience flooding issues. On August 28, 2007, Doña Ana County entered into contract number DAC-08-035 with URS Corporation to develop this Drainage Master Plan, the purpose of which is to provide a guide for future implementation of drainage controls in the area that is embraced by the residents.

Throughout the development of this report, involvement from the public has been solicited through public meetings, a presentation to the Board of County Commissioners, and a comment submittal process. In general, the public supports the proposed improvements and has provided invaluable insight into localized and historic conditions that has been used in the development of the report. Details on the public meetings are contained in Appendix D.



Existing Conditions

Topography and Drainage Patterns

The study area affecting drainage characteristics in Chaparral extends from the peak of the Franklin Mountains to the west, the Texas state line to the south (with some off-site drainage basins extending into Texas), and by the boundary of maneuver and training lands managed by Ft. Bliss known as McGregor and Doña Ana/Orogrande Ranges to the north (with some off-site drainage basins extending into the range). For the purposes of this Drainage Master Plan, the eastern boundary is limited to the county line between Doña Ana and Otero, although drainage issues from Doña Ana that are affected by issues in Otero have been considered.

The mountain foothills forming a portion of the drainage boundary comprise approximately 50 percent of the drainage area contributing to the runoff in Chaparral. There are 15 major arroyo systems originating out of the mountains flowing into the community of Chaparral, totaling about 20,000 acres of undeveloped land. In addition, four minor drainage basins located in Texas have been identified that total approximately 4,640 acres of undeveloped land that influence drainage patterns in Chaparral. The effective Flood Insurance Rate Maps (FIRMs) are included as Exhibit 3 through Exhibit 7 that identify these streams.

For the off-site study area, surface elevations range from 5,260 feet along Stream 1 to 4,128 feet at War Road. For the on-site study area, the surface elevations range from 4,140 feet along Stream 8 to 4,028 feet in Quirke Lake. The average surface slopes found throughout the off-site study area range from two percent in the lower foothills to as much as 50 percent in the higher elevations of the mountains. The average on-site local slope approximates one percent from west to east. Exhibit 8 presents a graphic depiction of these drainage basins.

Once entering the community of Chaparral, runoff flows into localized playas, the most significant being Quirke Lake, as shown on Exhibit 12. Five other playas are located within the community, and one detention structure exists in the area. The existing engineered flood control facilities in the community are shown on Exhibit 12 and consist of:

- Lisa Pond** was initially excavated in 1999; in 2000, the sideslopes and capacity were restored to the original configuration.
- DeLara Berm** was constructed in 2000 as a three-foot high berm to divert runoff flows west of DeLara Estates.
- The capacity of **Paloma Pond** was increased in 1990; in 1991 and again in 1993, the pond was re-excavated.
- Conveyance to **Hermosa Pond**, a natural playa, was improved in 1996 through construction of a two-foot deep channel, including culvert crossings at Oasis Drive.

Hydrologically and hydraulically, these components of the existing drainage system are connected in a way that results in three separate subsystems within the community:

1. **North System** that includes Streams 1 and 20, plus Playas 1 and 2.
2. **Central System** that includes Streams 2 and 3 discharging to Playa 3, which releases flows to Stream 4 and eventually Quirke Lake, plus Streams 7, 8, 9 and 10, all of which discharge into Quirke Lake.



3. **South System** that includes several previously unidentified and unnumbered streams discharging into Playa 5 (Paloma Pond) and Playa 6 (Hermosa Pond). Schematically, the three drainage systems are shown in Exhibit 9.

Details on the existing conditions were obtained through field reconnaissance, review of maintenance records, and input from the residents of Chaparral; these details are summarized in Table 1. The proposed improvements listed in Table 1 are discussed later in this report and shown on Exhibit 13 through Exhibit 15.

Table 1- Details of Existing Conditions

Proposed Improvement	Input from Residents	Maintenance Activity
<i>North System</i>		
Miami Upstream Channel	July 1999: A resident of 2285 Quitman complained that their neighbor had dammed up an arroyo with trash and chinks of concrete in order to cross it and that rain had washed away the top one foot of berm. Public Meeting 1 – A resident noted significant flooding along Quitman Drive.	July 2006: Alta Vista Road needed repair due to erosion caused by flooding.
Miami Downstream Channel		
Shiprock Channel	July 2006: A resident of 1225 Javelina Street asked permission to construct a berm around their house to protect it from flooding.	August 2006: A resident of Hot Peppers Road complained that the road routinely floods, causing problems and requiring repair.
Capitol Berm		
<i>Central System</i>		
Sunny Sands Channel	Public Meeting 1 – A resident noted “manageable with runoff” along Sunny Sands Road. Public Meeting 1 – A resident noted that water crosses Lisa Road from south to north around the intersection of Edna Drive.	



Proposed Improvement	Input from Residents	Maintenance Activity
Lorraine Channel	<p>October 1998: A resident of 198 DeLara Estates Road complained that, due large amounts of water that run through their property when it rains, their easement exit becomes impassable.</p> <p>July 1999: Residents of 330 and 340 County Road A74 noted that arroyos cross their property.</p> <p>August 1999: Flooding on County Road AO74 washed out road and exposed power lines along road, requiring clean up and grading.</p> <p>August 2001: A resident of 346 County Road A74 complained that berms cause water to channel through their property, threatening to wash out stables and a barn.</p> <p>August 2006: A resident of 198 De Lara Estates Road complained that their neighbor blocked an arroyo, causing substantial erosion on the residents' property.</p> <p>Public Meeting 1 – A resident stated that there were ponding issues on Quiet Pine Road between Laura and DeLora.</p> <p>Public Meeting 1 – A resident noted street flooding and access problems on Lisa Road between Tumbleweed Trail and Sagewood Drive.</p> <p>Public Meeting 1 – A resident noted that the paving of Carol Lane has caused runoff issues.</p>	<p>July 1998: Street flooding along Delara Estates Road, on the corner of Desert Aire and Finley Street and along Butler Heights Road noted as a routine event requiring clean up.</p>
Katydid Berm		
Wicker Berm		



Proposed Improvement	Input from Residents	Maintenance Activity
Edna Upstream Channel		July 1998: Street flooding along Delara Estates Road, on the corner of Desert Aire and Finley Street and along Butler Heights Road noted as a routine event requiring clean up.
Edna Downstream Channel		
Quirke Lake		
<i>South System</i>		
Lisa Pond		
Sand Dunes Berm		
County Line Channel		
Mesilla Upstream Channel	<p>Public Meeting 1 – A resident noted flooding issues at the corner of Luna Azul Road and Amparo Road.</p> <p>Public Meeting 1 – Residents noted flooding issues, including lot flooding, along Paloma Blanca Drive between the intersection of Amparo Road and the intersection of Coles Road.</p>	
Mesilla Downstream Channel	<p>June 2000: A resident of 549 Paseo Real complained that their neighbor graded their property, causing water to runoff onto the residents' property.</p>	
McCombs Upstream Channel	<p>Public Meeting 1 – Residents noted flooding issues and lot flooding at the intersection of Paloma Blanca Road and McCombs Road.</p> <p>Public Meeting 1 – A resident noted flooding issues along Lisa Drive just east of the McCombs Road intersection.</p>	



Proposed Improvement	Input from Residents	Maintenance Activity
McCombs Downstream Channel	Public Meeting 1 – A resident noted lot flooding on Paseo Real Drive between McCombs Road and Coles Road. Public Meeting 1 – A resident noted lot flooding on McCombs Road between Oasis Drive and Hermosa Drive.	
Playa 6 (Hermosa P0nd)	Public Meeting 1 – Residents noted flooding issues along McCombs Road, south of Hermosa Drive.	
Miscellaneous		
	October 1998: Roadways throughout Chaparral flooded by rainfall, requiring grading and dirt work for repair. Public Meeting 1 – Residents noted major maintenance issues, including shoulders washing out, throughout Chaparral. Residents also noted that roads are often higher in elevation than property, creating lot flooding issues.	

Geology

Each of the study areas for the community of Chaparral were evaluated for the following characteristics: (1) whether or not the study reach is located on an alluvial fan, and (2) if so, whether or not the study reach is located on an active portion of the fan. The active portions of alluvial fans are characterized by unstable and/or unconfined flow paths, active processes of erosion, sediment transport, and deposition (FEMA, 2003). The stream designations used below are coincident with the names used on the effective FIRMs contained as Exhibit 3 through Exhibit 7.

Stream 1

According to the geological map, the study reach is composed of floodplain and channel deposits along main streams inset into 1) older sandy alluvium with subordinate amounts of fine gravel, silt, and clay on the upper slope; 2) gravel terraces representing deposits by Pleistocene melt waters from the mountains on the lower slope; and 3) Holocene age coppice dunes, commonly three to seven feet high and 25 to 50 feet in diameter and generally elongated north of east on the flat areas. On this short fan, the sand facies may form an arcuate belt at the toe of the fan with slopes averaging 10 percent and commonly reworked into coppice dunes three to seven feet high. The study reach does not have alluvial fan morphology (USGS, 1962a; USGS, 1962b).

The study reach originates in the Franklin Mountains (composed of the Artesia Group at this location) and flows in a northeasterly direction through the northern portion of the Town of Chaparral and drains into Playa 1. The channel is well-defined and stable throughout the length of the study reach. Stream 1 is not considered to be an active alluvial fan.



Stream 2

According to the geological map, the study reach is composed of silty lake or playa deposits, which were laid down in Pleistocene lakes that flooded closed basins now marked by playas. Stream 2 is surrounded by Holocene age coppice dunes, commonly two to seven feet high and 25 to 50 feet in diameter, generally elongated north of east. The study reach does not have alluvial fan morphology (USGS, 1962a; USGS, 1962b).

The study reach flows southeastward into a playa that interconnects with Quirke Lake via a channel on the southern end of the playa. Throughout the length of the study reach, there is no discernable channel and evidence of sheetflow flooding. Stream 2 is not considered to be an active alluvial fan.

Stream 7

According to the geological map, this study reach is composed of floodplain and channel deposits along main streams inset into 1) older sandy alluvium with subordinate amounts of fine gravel, silt, and clay on the upper slope; 2) gravel terraces representing deposits by Pleistocene melt waters from the mountains on the lower slope; and 3) Holocene age coppice dunes, commonly three to seven feet high and 25 to 50 feet in diameter and generally elongated north of east on the flat areas. On this short fan, the sand facies may form an arcuate belt at the toe of the fan with slopes averaging 10 percent and commonly reworked into coppice dunes three to seven feet high. The study reach has alluvial fan morphology (USGS, 1974; USGS, 1962a; USGS, 1962b).

The study reach originates in the Franklin Mountains (composed of the Artesia Group at this location) and flows in a southeasterly direction through the central portion of the Town of Chaparral and drains into Quirke Lake. Stream 7 is characterized by unstable and/or unconfined flow paths and active erosion. Stream 7 is considered to be an active alluvial fan.

Stream 8

According to the geological map, the study reach is composed of floodplain and channel deposits along main streams inset into 1) older sandy alluvium with subordinate amounts of fine gravel, silt, and clay on the upper slope; 2) gravel terraces representing deposits by Pleistocene melt waters from the mountains on the lower slope; and 3) Holocene age coppice dunes, commonly three to seven feet high and 25 to 50 feet in diameter and generally elongated north of east on the flat areas. On this short fan, the sand facies may form an arcuate belt at the toe of the fan with slopes averaging 10 percent and commonly reworked into coppice dunes three to seven feet high. The study reach has alluvial fan morphology (USGS, 1974; USGS, 1962a; USGS, 1962b).

The study reach originates in the gravel terraces and splits into two flowpaths just west of New Mexico State Highway 213, and from there, flows in a northeasterly direction to the confluence with Stream 7. Stream 8 is characterized by unstable and/or unconfined flow paths and active erosion. Stream 8 is considered to be an active alluvial fan.

Stream 9

Stream 9 is not discernable on the geologic map; however, given its location, it has similar composition to Stream 8. Therefore, the study reach is composed of floodplain and channel deposits along main streams inset into 1) older sandy alluvium with subordinate amounts of fine gravel, silt, and clay on the upper slope; 2) gravel terraces representing deposits by Pleistocene melt waters from the mountains on the lower slope; and (3) Holocene age coppice dunes, commonly three to seven feet high and 25 to 50 feet in diameter and generally elongated north of east on the flat areas. On this short fan, the sand facies may form an



arcuate belt at the toe of the fan with slopes averaging 10 percent and commonly reworded into coppice dunes three to seven feet high. The study reach has alluvial fan morphology (USGS, 1974; USGS, 1962a; USGS, 1962b).

The study reach originates in the Franklin Mountains (composed of the Artesia Group at this location) and flows in a southeasterly direction through the central portion of the Town of Chaparral and drains into Quirke Lake. Stream 9 is characterized by unstable and/or unconfined flow paths and active erosion. Stream 9 is considered to be an active alluvial fan.

Stream 10

Stream 10 is not discernable on the geologic map, however, given its location; it has similar composition to Stream 8. Therefore, the study reach is composed of floodplain and channel deposits along main streams inset into 1) older sandy alluvium with subordinate amounts of fine gravel, silt, and clay on the upper slope; 2) gravel terraces representing deposits by Pleistocene melt waters from the mountains on the lower slope; and 3) Holocene age coppice dunes, commonly three to seven feet high and 25 to 50 feet in diameter and generally elongated north of east on the flat areas. On this short fan, the sand facies may form an arcuate belt at the toe of the fan with slopes averaging 10 percent and commonly reworded into coppice dunes three to seven feet high. The study reach has alluvial fan morphology (USGS, 1974; USGS, 1962a; USGS, 1962b).

The study reach originates in the Franklin Mountains (composed of the Artesia Group at this location) and flows in a southeasterly direction through the central portion of the Town of Chaparral and drains into Quirke Lake. Stream 10 is characterized by unstable and/or unconfined flow paths and active erosion. Stream 10 is considered to be an active alluvial fan.

Land Use

Land use within the community of Chaparral is typical of rural development with low density residential use, local businesses, and community services such as schools and emergency services. A localized area of light industrial also exists in the vicinity of McCombs Road from Lisa Road to Hermosa Road. The community is surrounded by open space due to land ownership of the Bureau of Land Management (BLM), NM State Land Office (SLO), and McGregor Range as shown on Exhibit 11.

Although it is expected that growth will occur in Chaparral, the resulting impact to the drainage infrastructure should not be significant, as current County ordinances prohibit increasing the storm water runoff from a developed property over the historic condition.



Hydrologic and Hydraulic Analyses

Software

Development of the analyses has been performed utilizing several publicly and commercially available software packages including:

Hydraulic Engineering Circular – Hydrologic Modeling System (HEC-HMS) is designed to simulate the precipitation-runoff processes of dendritic watershed systems. This includes large river basin water supply and flood hydrology, and small urban or natural watershed runoff. Hydrographs produced by the program are used directly or in conjunction with other software for studies of water availability, urban drainage, flow forecasting, future urbanization impact, reservoir spillway design, flood damage reduction, floodplain regulation, and systems operation.

FLO-2D is two-dimensional flood routing model that can simulate rainfall runoff. The variable rainfall runoff can be simulated with multiple inflow flood hydrographs, obtained from HEC-HMS routed over alluvial fans and floodplains. FLO-2D is a simple volume conservation model that distributes a flood hydrograph over a system of square grid elements. It numerically routes a flood hydrograph while predicting the area of inundation and simulating floodwave attenuation. The model is effective for analyzing channel overbank flows and it can also be used to analyze unconventional flooding problems, such as unconfined flows over complex alluvial fan topography and roughness. Multiple flood hydrographs can be introduced to the system at any number of inflow points. FLO-2D models terrain relief, such as berms and existing ponds, over the LIDAR data. Precipitation losses simulated in the FLO-2D model include abstraction (interception) and infiltration. Overland and channel infiltration is simulated using the Green-Ampt infiltration model.

FlowMaster is used for hydraulic analyses of the open channels evaluated as potential improvements.

ArcMap is a full feature geographic information system (GIS) software for visualizing, managing, creating, and analyzing geographic data. ArcMap allows for creating interactive maps, visual models, and spatially analyzed data.

ArcHydro, an extension of ArcMap, is a geospatial data model for water resources that has an associated set of tools to support hydrologic analysis. Hydrologic simulation is accompanied by exchanging data between ArcHydro and an independent hydrologic model, such as HEC-HMS.

Rainfall Runoff Model

The rainfall-runoff model was developed using the Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS). The model utilized the SCS curve number for the loss rate, the SCS method for the runoff transform, and the SCS unit hydrograph for the precipitation.

Drainage Basin Area Delineation

Topographic data obtained from Doña Ana County Flood Commission was used, in conjunction with USGS DEM data, to create a terrain model of Doña Ana County. The watersheds were delineated using field reconnaissance and available topographic mapping. A map showing the basin delineation along can be found on Exhibit 8.



Collected Data and Parameter Estimation

Precipitation Data

On August 6, 2003, the National Oceanic and Atmospheric Administration (NOAA) released updated Precipitation Frequency Data for the state of New Mexico. NOAA Atlas 14 superseded the NOAA Atlas 2 data.

The centroid of the study area was approximated based on the watershed delineation. The coordinate of the centroid were input into the NOAA Atlas 14 website. The NOAA Atlas website uses the coordinates of a fixed location to interpolate the average precipitation values for that location. The following table shows the precipitation data obtained.

Table 2- Precipitation Data

Average Recurrence Interval (years)	Precipitation Frequency Estimates 24 Hour Duration (inches)
100	3.69

Watershed Parameters

Watershed characteristics were obtained through field investigation, available topographic data, and available orthophotogrammetric data. The watershed parameters used in analysis is summarized in the following table and can be found in Appendix B.

Table 3- Watershed Parameters

System	Basin Designation	Basin Area (acres)	Curve Number	Lag Time (minutes)
Amparo	B-AMA	759.78	83	141
	B-AMB	604.58	83	233
	B-AMC	719.01	83	149
	B-AMD	1568.56	84	380
Edna	B-EDA	403.97	83	129
	B-EDB	633.20	83	152
	B-EDC	825.57	83	123
	B-EDD	760.19	83	183
	B-EDE	1782.41	83	403
Lisa	B-LIA	899.31	83	157
	B-LIB	424.71	88	47
	B-LIC	381.99	87	64
	B-LID	3552.83	91	127



System	Basin Designation	Basin Area (acres)	Curve Number	Lag Time (minutes)
McCombs	B-MCA	721.46	83	160
Miami	B-MIA	63.73	83	47
	B-MIB	530.84	82	116
	B-MIC	161.55	82	87
	B-MID	4222.24	90	106
	B-P1A	3056.35	83	150
Playa 1	B-P1B	2739.30	83	260
	B-P1C	392.24	80	55
	B-P1D	342.33	82	76
	B-P6A	1538.01	84	159
Playa 6	B-P6B	158.35	90	30
	B-P6C	101.16	88	79
	B-P6D	522.18	85	84
	B-P6E	3851.94	90	118
Prescott Anthony	B-PAA	411.07	83	190
Quirke Lake	B-QLA	3006.94	83	186
	B-QLB	608.95	88	47
	B-QLC	958.08	92	41
	B-QLD	259.17	90	40
	B-QUE	467.75	89	72
Shiprock	B-SHA	1550.47	83	115
	B-SHB	358.49	84	69
	B-SHC	424.92	83	107

Modeling Considerations

Runoff Losses

The Natural Resources Conservation Service (NRCS), formerly the SCS, curve number (CN) approach was used to determine the runoff losses due to infiltration and interception. The curve number was based on soil type and land use classification for each sub-basin.



Soil Types and Land Use

Soil types and land use classifications were used to determine the average curve number for each sub-basin of the watershed. Soil types were obtained from the NRCS in GIS format. A map showing the Soil Types can be found in Exhibit 10 at the end of this report. Land use classifications were determined by inspecting a digital photograph of the sub-basin then manually creating the land use areas in GIS format. A map showing the Land Use Types can be found Exhibit 11. The soil type and land use classifications were then used as input for WISE and a routine within WISE calculated the average curve number for each sub-basin.

Runoff Transform

The lag time input parameters were hand calculated in accordance with the NRCS (SCS) TR 55 method procedures. Upstream and downstream elevations were obtained from available topographic information. Longest runoff paths were estimated from the available topographic information. Runoff coefficients were obtained through field reconnaissance. Utilizing these input parameters, the lag time values were compiled through spreadsheet calculation. The lag time calculations can be found in Appendix B.

Rainfall Distribution

The traditional Type II rainfall distribution was revised to define four different distributions for the different physiographic regions in New Mexico. A Type IIa-75 is the distribution to be used for Doña Ana County. The Natural Resources Conservation Services (NRCS) provided the Type IIa-75 rainfall distribution used and has a time step of 15 minutes.

Channel Routing

The Muskingum-Cunge method was used for hydrograph routing. This methodology is based on the Muskingum method commonly used as a routing method for handling a variable discharge-storage relationship, which models the storage volume in a channel through a combination of wedge and prism storages. This is a linear hydrologic storage routing method. The input parameters for this methodology are routing length, channel slope, Manning's "n", and an 8-point cross section configuration. The cross section configuration was developed from available topographic information. The Manning's "n" values were obtained from the field reconnaissance notes and available orthophotography. The routing length and channel slope were obtained from available topographic information.

A complete set of database tables, hydrologic models, and spatial files can be found in digital format in Appendix E.

Hydraulic Analysis

Existing Floodprone Area Determination

Upon close evaluation of the effective FIRM maps for the area, it was determined that the flooding represented on the maps was not an accurate reflection of the conditions encountered within the Chaparral developed area. Due to the indistinguishable flowpaths through town, it was determined that a two-dimensional analysis would be the most appropriate methodology to determine the direction of flows and the pooling of water in the playa areas.

Flo-2D, version 2004.10, was used to analyze the flood prone areas within Chaparral and to develop the existing flood boundaries. A grid size of 200 feet was utilized for this analysis. This grid size allowed for efficient computational time while providing sufficient accuracy for conceptual design and mapping. A Digital Elevation Model was developed from available topographic data. Inflow node locations were identified based on upstream points of watersheds as delineated during hydrologic analysis. The basin hydrograph, as developed during the hydrologic analysis, was input as the inflow condition for analysis.



The Mapper extension within the Flo-2D software package was then used to develop smooth flood contours which represent a smooth, continuous boundary. Exhibit 12 shows the existing flood boundaries and associated depths of anticipated flooding.

Analysis and Development of Proposed Improvements

Based on the results from the two-dimensional analysis in conjunction with public meetings, the primary areas for improvement were identified. Proposed improvements were modeling utilizing methodologies appropriate for the type of improvement.

Channelized Conveyance

Several criteria led to the development of the channelized conveyance system. The criteria were developed from local ordinances, maintenance requirements, and to maintain the local esthetic character of the area. FlowMaster, version 8.01, was used to determine channel configurations based on the necessary conveyance.

Lining Constraints

To maintain the natural esthetic quality of the channel system and because of anticipated maintenance, it was determined that the channels would remain natural in nature and would not consist of any lining reinforcement.

Velocity Constraints

Per the Doña Ana County Flood Commissions ordinance, a maximum velocity of 4 feet per second is permissible for natural lined channels.

Elevation Drops

A result of the velocity limitation as well as the lining material selection, it was determined that elevation drop structures would be needed. A maximum drop for each structure was set at 2 feet and is to be constructed out of Rip-Rap Gabions.

Flow Diversion

Due to the broad, flat natural flow paths, berms will be needed to help direct the shallow flows into the channel system. Berm lengths and heights were determined from the shallow flood boundaries and from available topographic data.

Additional Retention Storage

There are 4 existing ponding areas identified by Doña Ana County as part of the storm water system:

1. **Quirke Lake** is identified by a large playa located approximately at the center of town with no clearly defined limits. Existing storm water accumulates to elevation to flood across Lisa Road. The limits of this flooding, in conjunction with the topographic data, were used to approximate a volume of storage that would need to be redirected near the south portion of Quirke Lake. This additional storage can be accommodated by the deepening of the defined area, as shown in Exhibit 14. This volume diversion was computed using the average-end-area method and the AutoCAD software.
2. **Lisa Pond** is a small retention pond located just North of Lisa Road. The storage volume needed at this location was determined by delineating the area directly contributing to this structure and performing a simplified runoff computation. It was found that additional storage was needed and could be accommodated within the current Doña Ana County Flood Commission property limits. The existing and anticipated pond volume was computed using the average-end-area method and the AutoCAD software.



3. **Paloma Pond** is a small retention pond located southeast of McCombs and Paloma Blanca. This structure will be replaced by the proposed channel conveyance system. The existing pond volume was approximated using the average-end-area method and the AutoCAD software.
4. **Hermosa Pond**, also known as Playa 6, is a fairly large natural ponding area located just northeast of McCombs and Stateline. Since it is not a defined ponding area, it is recommended that the sump of this playa be deepened slightly to account for the diversion of the Paloma Pond storage.



Potential Improvements

Infrastructure

Several alternatives were initially identified for infrastructure improvements to alleviate flooding in Chaparral. The overriding concept is to control conveyance of the storm water flows, as it is impractical to detain these flows upstream, because they will only travel downstream to the playas for retention as they have historically. Consideration was initially given to economic viability, maintenance requirements, and maintaining the rural character of the community while focusing on the areas of existing development resulting in the proposed improvements detailed below.

Costs were estimated in 2007 dollars for planning purposes using actual bids from comparable projects in the area, and include non-construction costs such as property acquisition (values determined from review of data from the Dona Ana County Assessor), professional services (administrative, engineering, survey, and legal), and contingency. It is important to note that the alignments shown in the Exhibits are conceptual in nature. It is anticipated that investigations will be made during the detailed design phase of program implementation of the actual improvements to optimize the alignment. Finally, costs have been developed for two alternatives of channel crossing structures at roadways: 1) low water crossings (LWC); and 2) concrete box culverts (CBCs). During the detailed design of the improvements, the final alignment of the channel viewed with the roadway usage will determine which of these alternates to pursue at individual locations.

It should be noted that each component within the system can be phased to accommodate the availability of partial funding. Sequencing of the improvements should consider:

- Detention facility improvements must be constructed prior to improvement of any conveyance system draining into the detention facility.
- Conveyance facility improvements can be constructed in phases from the downstream end to the upstream end.
- Diversion berms should be constructed after the associated conveyance facility improvement is complete.

North System

Conveyance of storm water in the North System is proposed through an engineered channel through Stream 1, and a three-foot high berm paralleling Capitol Street for diversion of off-site flows into an engineered channel paralleling Shiprock to Playa 1 as shown on Exhibit 13. In order to reduce the water velocity in these engineered channels to prevent erosion, drop structures will be required to maintain maximum slopes of the channel bottom. The physical characteristics of the channel improvements are summarized in Table 4.



Table 4- Proposed Channel Properties, North System

	MIAMI CHANNEL, UPSTREAM OF SHIPROCK CHANNEL	MIAMI CHANNEL, DOWNSTREAM OF SHIPROCK CHANNEL	SHIPROCK CHANNEL
Q100, cfs	3,892	4,216	313
Channel Surface	Earthen	Earthen	Earthen
Length, Feet	6,200	2,600	5,800
Bottom Width, feet	225	245	15
Sideslopes (horizontal:vertical)	4:1	4:1	4:1
Longitudinal Slope	0.16%	0.16%	0.33%
Height, feet (including freeboard)	5	5	4
V100, fps	4.0	4.0	3.9

The estimated cost for the proposed improvements to the North System are detailed in Appendix C and summarized in Table 5.



Table 5- Estimated Cost, North System

(\$1,000's)

	Miami Channel Upstream	Miami Channel Downstream	Shiprock Channel	Capitol Berm	Item Total
Construction					
Excavation	\$ 1,692	\$ 762	\$ 162	\$ 63	\$ 2,679
Roadway Crossing (LWC)	\$ 656	\$ 196	\$ 284	-	\$ 1,136
Driveway Crossing (LWC)	\$ -	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 1,584	\$ 198	\$ 44	\$ -	\$ 1,826
Miscellaneous (10%)	\$ 394	\$ 116	\$ 49	\$ 7	\$ 566
Subtotal	\$ 4,326	\$ 1,272	\$ 539	\$ 70	\$ 6,207
Non-Construction	\$ -	\$ -	\$ -	\$ -	\$ -
Property*	\$ 820	\$ 380	\$ 180	\$ 20	\$ 1,400
Professional Services (20%)	\$ 866	\$ 255	\$ 108	\$ 14	\$ 1,243
Contingencies (15%)	\$ 649	\$ 191	\$ 81	\$ 11	\$ 932
Subtotal	\$ 2,335	\$ 826	\$ 369	\$ 45	\$ 3,575
Total (LWC)	\$ 6,661	\$ 2,098	\$ 908	\$ 115	\$ 9,782
Total (CBC)	\$ 12,309	\$ 3,589	\$ 1,241	\$ 115	\$ 17,254

* A Portion of property for Capitol Berm is owned by the State of New Mexico and there was no cost assumed for the use of this property

As shown in Exhibit 13, mitigation of flooding with the proposed improvements to the North System is estimated to encompass approximately 350 acres of properties. In December 2007, the Doña Ana Flood Commission compiled statistics on the properties that would be removed from floodprone areas with the improvements detailed above for the north stream; these elements are detailed in Appendix E and summarized in Table 6.



Table 6- Properties Removed from Flood-Prone Areas with Proposed North System Improvements

	Number of Parcels	Total Number of Structures
Residential Parcels	92	79
Commercial Parcels	2	0
Ag-Related Parcels	1	16
Storage Parcels	10	31
Vacant Parcels	122	0
Places of Worship	0	0
Government-Owned Parcels	0	0
School Parcels	0	0
Other/Uncertain Buildings	n/a	42
Total	226	167

Central System

Conveyance of storm water in the Central System is proposed through a six-foot high berm paralleling Katydid Channel to divert flows from Streams 7 and 8 into the proposed engineered channel, Lorraine Channel, from the berm to Quirke Lake. A second system is proposed north of Lisa Road, which consists of a 10-foot high diversion berm paralleling Wicker that will divert flows into a proposed engineered channel paralleling Edna. A second channel is proposed to feed into this Edna Channel that extends to the south in the vicinity of Sunny Sands as shown on Exhibit 14. Similar to the proposed channels in the northern area, Lorraine Channel and Sunny Sands Channel will require drop structures to maintain a maximum slope to prevent erosion of the channels. The physical characteristics of the channel improvements are summarized in Table 7.



Table 7- Proposed Channel Properties, Central System

	LORRAINE CHANNEL	EDNA CHANNEL, UPSTREAM OF SUNNY SANDS CHANNEL	EDNA CHANNEL, DOWNSTREAM OF SUNNY SANDS CHANNEL	SUNNY SANDS CHANNEL
Q100, cfs	3,701	732	1,237	304
Channel Surface	Earthen	Earthen	Earthen	Earthen
Length, Feet	6,500	4,200	4,700	4,800
Bottom Width, feet	218	50	41	14
Sideslopes (horizontal:vertical)	4:1	4:1	4:1	4:1
Longitudinal Slope	0.15%	0.26%	0.16%	0.33%
Height, feet (including freeboard)	5	4	6	4
V100, fps	4.0	4.0	4.0	3.9

The estimated cost for the proposed improvements to the Central System are detailed in Appendix C and summarized in Table 8.



Table 8- Estimated Cost, Central System

(\$1,000's)

	Sunny Sands Channel	Edna Channel Upstream	Edna Channel Downstream	Lorraine Channel	Katydid Berm	Wicker Berm	Quirke Lake	Item Total
Construction								
Excavation	\$ 132	\$ 252	\$ 408	\$ 1,734	\$ 259	\$ 224	\$ 3,486	\$ 6,495
Roadway Crossing	\$ 143	\$ 220	\$ 55	\$ 93	\$ 64	\$ -	\$ -	\$ 575
Driveway Crossing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 44	\$ 22	\$ 44	\$ 1,210	\$ -	\$ -	\$ -	\$ 1,320
Miscellaneous (10%)	\$ 32	\$ 50	\$ 51	\$ 304	\$ 33	\$ 23	\$ 349	\$ 842
Subtotal	\$ 351	\$ 544	\$ 558	\$ 3,341	\$ 356	\$ 247	\$ 3,835	\$ 9,232
Non-Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Property*	\$ 160	\$ 200	\$ 240	\$ 600	\$ -	\$ -	\$ -	\$ 1,200
Professional Services (20%)	\$ 71	\$ 109	\$ 112	\$ 669	\$ 72	\$ 50	\$ 767	\$ 1,850
Contingencies (15%)	\$ 53	\$ 82	\$ 84	\$ 502	\$ 54	\$ 38	\$ 576	\$ 1,389
Subtotal	\$ 284	\$ 391	\$ 436	\$ 1,771	\$ 126	\$ 88	\$ 1,343	\$ 4,439
Total (LWC)	\$ 635	\$ 935	\$ 994	\$ 5,112	\$ 482	\$ 335	\$ 5,178	\$ 13,671
Total (CBC)	\$ 771	\$ 1,535	\$ 1,168	\$ 5,747	\$ 482	\$ 335	\$ 5,178	\$ 15,216

* A Portion of property for Lorraine Channel is owned by Doña Ana County and there was no cost assumed for the use of this property

Property for Katydid Berm is owned by the Bureau of Land Management and there was no cost assumed for the use of this property

Property for Wicker Berm is owned by the Bureau of Land Management and there was no cost assumed for the use of this property

Property for Quirke Lake is privately owned with work consisting of deepening an existing structure and there was no cost assumed for the use of this property

As shown in Exhibit 14, mitigation of flooding with the proposed improvements to the Central System is estimated to encompass approximately 690 acres of properties. In December 2007, the Doña Ana Flood Commission compiled statistics on the properties that would be removed from floodprone areas with the improvements detailed above for the north system; these elements are detailed in Appendix E and summarized in Table 9.



Table 9- Properties Removed from Flood-Prone Areas with Proposed Central System Improvements

	Number of Parcels	Total Number of Structures
Residential Parcels	206	204
Commercial Parcels	2	4
Ag-Related Parcels	7	64
Storage Parcels	1	54
Vacant Parcels	78	0
Places of Worship	1	1
Government-Owned Parcels	1	0
School Parcels	0	1
Other/Uncertain Buildings	n/a	52
Total	296	380

South System

Conveyance of storm water in the South System is proposed through channelizing flows through Paloma Pond from Lisa Road to Hermosa Pond (Playa 6). A second engineered conveyance system is proposed, the Mesilla Channel, to convey flows from a previously unidentified stream in this vicinity. Lisa Pond currently exists within the South System, and has been excavated to provide a volume of approximately 11.3 acre-ft. A volume of 39.2 acre-ft is required for retention of the 100-year storm event, which will require a pond depth of 14 feet over the 4.7 acres currently owned by Doña Ana County. Finally, a berm is proposed for the easternmost stream (previously not identified) for retention of the storm water flows. The physical characteristics of the channel improvements are summarized in Table 10Error! Reference source not found..



Table 10- Proposed Channel Properties, South System

	MCCOMBS CHANNEL, UPSTREAM OF PLAYA 5 (PALOMA POND)	MCCOMBS CHANNEL, DOWN-STREAM OF PLAYA 5 (PALOMA POND)	PREScott- ANTHONY CHANNEL	AMPARO CHANNEL, UPSTREAM OF LUNA AZUL	AMPARO CHANNEL, DOWN-STREAM OF LUNA AZUL
Q100, cfs	332	332	160	508	1,118
Channel Surface	Earthen	Earthen	Earthen	Earthen	Earthen
Length, feet	4,400	5,200	3,200	3,400	8,300
Bottom Width, feet	17	24	10	43	38
Sideslopes (horizontal:vertical)	4:1	4:1	4:1	4:1	4:1
Longitudinal Slope	0.31%	0.19%	0.14%	0.28%	0.15%
Height, feet (including freeboard)	4	4	4	4	6
V100, fps	3.8	3.1	2.4	3.9	3.9

The estimated costs for the proposed improvements to the South System are detailed in Appendix C and summarized in Table 11.



Table 11- Estimated Cost, South System

(\$1,000's)

	McCombs Channel Upstream	McCombs Channel Downstream	Prescott Anthony Channel	Amparo Upstream Channel	Amparo Downstream Channel	Sand Dunes Berm	Lissa Pond	Playa 6 (Hernosa Pond)	Item Total
Construction									
Excavation	\$ 132	\$ 624	\$ 78	\$ 144	\$ 690	\$ 21	\$ 360	\$ 30	\$ 2,079
Roadway Crossing (LWC)	\$ 192	\$ 198	\$ 185	\$ 104	\$ 368	-	-	-	\$ 1,047
Driveway Crossing (LWC)	\$ -	\$ -	\$ -	\$ -	\$ -	-	-	-	-
Drop Structures	\$ 132	\$ 132	\$ 66	\$ 88	\$ 44	-	-	-	\$ 462
Miscellaneous (10%)	\$ 46	\$ 96	\$ 33	\$ 34	\$ 111	\$ 3	\$ 36	\$ 3	\$ 362
Subtotal	\$ 502	\$ 1,050	\$ 362	\$ 370	\$ 1,213	\$ 24	\$ 396	\$ 33	\$ 3,950
Non-Construction									
Property*	\$ 140	\$ 280	\$ 60	\$ 140	\$ 420	-	-	-	\$ 1,040
Professional Services (20%)	\$ 101	\$ 210	\$ 73	\$ 74	\$ 243	\$ 5	\$ 80	\$ 7	\$ 793
Contingencies (15%)	\$ 76	\$ 158	\$ 55	\$ 56	\$ 182	\$ 4	\$ 60	\$ 5	\$ 596
Subtotal	\$ 317	\$ 648	\$ 188	\$ 270	\$ 845	\$ 9	\$ 140	\$ 12	\$ 2,429
Total (LWC)	\$ 819	\$ 1,698	\$ 550	\$ 640	\$ 2,058	\$ 33	\$ 536	\$ 45	\$ 6,379
Total (CBC)	\$ 998	\$ 2,224	\$ 567	\$ 1,101	\$ 2,951	\$ 33	\$ 536	\$ 45	\$ 8,455

* A Portion of property for County Line Channel is owned by the Gadsten School District and there was no cost assumed for the use of this property

As shown in Exhibit 14, mitigation of flooding with the proposed improvements to the Central System is estimated to encompass approximately 440 acres of properties. In December 2007, the Doña Ana Flood Commission compiled statistics on the properties that would be removed from floodprone areas with the improvements detailed above for the north system; these elements are detailed in Appendix E and summarized in Table 12.



Table 12- Properties Removed from Flood-Prone Areas with Proposed South System Improvements

	Number of Parcels	Total Number of Structures
Residential Parcels	185	591
Commercial Parcels	7	13
Ag-Related Parcels	4	109
Outbuildings		176
Storage Parcels	2	
Vacant Parcels	80	
Places of Worship	1	1
Government-Owned Parcels	0	1
School Parcels	2	12
Other/Undetermined Buildings	n/a	244
Total	281	1,147

Administrative Controls

Flood damage and prevention is currently regulated by the “Doña Ana County Flood Damage Prevention Ordinance” (Ordinance Number 161-95) enacting Flood Damage Prevention and Flood Hazard Reduction. The intended result of the ordinance is to comply with the minimum standards for coverage under the National Flood Insurance Program (NFIP) administered by FEMA with involvement by the New Mexico Department of Homeland Security and Emergency Management.

It should be noted that several of the improvements will require review and/or approval from various state and federal agencies. For example, the berms and detention improvements may be within the jurisdiction of the New Mexico State Engineer, and the berms may be required to meet FEMA levee certification requirements to be recognized as flood protection.

Similarly, revision to the FIRM's should be made with all of the improvements through FEMA processes for CLOMR/LOMR in order to assure that the residents receive proper consideration for flood insurance.



References

- Bentley Systems, Inc. Haestad Methods, *FlowMaster*, Version 08.01.066.00, November 2005
- Chaparral*. 2005. New Mexico Tourism Department. 05 Dec. 2007.
<http://www.nmtourism.org/place/loc/bymap/page/DB-place/place/1420.html>
- Chow, V.T., Maidment, D.R., and Mays, L.W. 1988. *Applied Hydrology*. McGraw-Hill, New York.
- Doña Ana Flood Commission – 2008. Colonias Initiative via personal communication with Leticia Segovia, PE, CFM, Assistant Director, Las Cruces, NM.
- Federal Emergency Management Agency (FEMA). 2003. *Guidelines and Specifications for Flood Hazard Mapping Partners*, Appendix G: Guidance for Alluvial Fan Flooding Analyses and Mapping. Washington D.C.
- FLO-2D Software, Inc. *FLO-2D Users Manual*, Version 2004.01. 2004
- Highway Drainage Guidelines* published by the American Association of State Highway and Transportation Officials, 1999 Metric Edition
- Hunt, Charles B. 1977. Geologic Map 41: Surficial Geology of Southeast New Mexico. New Mexico Bureau of Mines & Mineral Resources, a division of New Mexico Institute of Mining and Technology.
- James, Wesley P., and Wurbs, Ralph A. *Water Resources Engineering*, 1st Ed.: Prentice Hall, 2001.
- New Mexico State Highway and Transportation Department Preliminary Design Bureau/Drainage Section, Drainage Manual Volume 1, Hydrology December, 1995, p. 3-19
- National Oceanic and Atmospheric Administration (NOAA). 2004. *Precipitation-Frequency Atlas of the United States, Volume 1: Semiarid Southwest* (Arizona, Southeast California, Nevada, New Mexico, Utah) NOAA Atlas 14. Silver Spring, MD.
- Natural Resources Conservation Service (NRCS). 2005. Type NM II-a Rainfall Distributions via personal communication with Dan Murray PE, Hydraulic Engineer & Water Supply Specialist, Albuquerque, NM.
- Natural Resources Conservation Service (NRCS). 1986. *Urban Hydrology for Small Watersheds, Technical Release No. 55*. U.S. Department of Agriculture. Washington, DC.
- Soil Survey Geographic (SSURGO). 2000. SSURGO Database for Doña Ana County Area, New Mexico. Fort Worth, Texas.
- U.S. Army Corps of Engineers (USACE). 2001. *Hydrologic Modeling System, HEC-HMS User's Manual* and software version 3.1.0. Hydrologic Engineering Center. Davis, CA.
- United States Geological Survey (USGS). 1962a. Anthony, N. Mex., 15' Quadrangle (scale 1:24,000), Denver, CO.



USGS. 1962b. Newman SW, N. Mex., 15' Quadrangle (scale 1:24,000), Denver, CO.

USGS. 1967. Canutillo, Tex-N. Mex., 15' Quadrangle (scale 1:24,000), Denver, CO.

USGS. 1974. North Franklin Mountain, Tex – N. Mex., 15' Quadrangle scale 1:24,000),
Denver, CO.



Glossary of Terms

The following terms are used throughout this report as defined below. Unless otherwise noted, these definitions were obtained from *Highway Drainage Guidelines* published by the American Association of State Highway and Transportation Officials, 1999 Metric Edition.

Alluvial – Referring to deposits of silts, sands, gravel, or similar detrital material which has been transported by running water.

Antecedent Moisture Condition (AMC) – The degree of wetness of a watershed's surface soils at the beginning of a storm.

Basin, Detention – A basin or reservoir incorporated into the watershed whereby runoff is temporarily stored, thus attenuating the peak of the runoff hydrograph. A stormwater management facility that impounds runoff and temporarily impounds runoff and discharges it through a hydraulic outlet structure to a downstream conveyance structure.

Basis, Retention – A basin or reservoir wherein water is stored for regulating a flood. It does not have an uncontrolled outlet. The stored water is disposed by such means as infiltration, injection, (or dry) wells, or by release to the downstream drainage system after the storm event. The release may be though a gate-controlled gravity system or by pumping.

Curve Number¹ (CN) - Runoff curve numbers are used to quantify rainfall losses such as infiltration, interception and depression storage. In practice, curve numbers range from about 40 to 100, with larger curve numbers representing more runoff. Factors such as land use, ground cover type, hydrologic condition and hydrologic soil group are used to select a curve number.

Freeboard - Vertical clearance between the lowest structural member of the bridge superstructure, the top culver invert, or the point of escape in a canal or channel to the water surface elevation of a flood. Freeboard may also be the vertical distance above a design stage that is allowed for waves, surges, drift and other contingencies. The vertical distance between the level of the water surface, usually corresponding to the design discharge (or wave runup) selected for freeboard considerations and a point of interest such as a low chord of a bridge beam, specific location on the roadway grade, or top of a channel bank. The distance between such things as the normal operating level and the top of the sides of an open conduit or channel, or the crest of a dam that is left to allow for wave action, floating debris, or any other condition or emergency, without overtopping the structure. For irrigation flows intercepting runoff, freeboard is based on the expected water surface elevation determined for the sum of the water right, flood right, and design discharge.

The marginal height provided above [the] design [discharge] lines, [stage] on levees and in certain channels, to ensure, as fully as practicable, against overtopping due to uncertainties in [such things as] the state of project maintenance or flood flow characteristics. In appropriate circumstances, special increments of levee freeboard may be provided to achieve design objectives (e.g., to control, in such an extremity, the location where initial overtopping of a levee would take place; to reduce wave overtopping; to extend the interval between major maintenance efforts for removal of tree growth, sediment deposition, etc. from the channel the levee bounds). Added height to earth levees is sometimes provided to allow [freeboard] for settlement. In project evaluations, one-half of the inundation reduction benefits creditable to the levee freeboard zone may be included.



Hydrologic Models – Mathematical equations, algorithms and/or logic that represent the rainfall runoff process in a watershed.

Hydrologic Soil Group – A group of soils having the same runoff potential under similar storm and cover conditions.

Hydrologic Soil Group A has high infiltration rates, consisting of deep and well drained sands or gravels.

Hydrologic Soil Group B has moderate infiltration rates when thoroughly wetted and consists of moderately deep to deep and moderately well to well drained soils with moderately fine to moderately coarse textures.

Hydrologic Soil Group C consists predominantly of soils with high clay content, including clay loams and some shallow sandy loams, which have slow infiltration rates when thoroughly wetted. This soil group consists chiefly of soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture.

Hydrologic Soil Group D soils are clay loam, silty clay loam, sandy clay, silty clay or clay. This hydrologic soil group has the highest runoff potential with very low infiltration rates when thoroughly wetted and consists chiefly of clay soils with high swelling potential.

Lake, Playa – Lakes having a nearly level area at the bottom of a basin in an arid or semi-arid region; the beach or bank of a river. An intermittent pond or lake with no outlet. An undrained basin that, at times, becomes a temporary, shallow lake. The term “Playa” is more common.

Manning's n – A coefficient of roughness, used in a Manning's Equation for estimating the capacity of a channel to convey water. Generally, “n” values are determined by inspection of the channel. The roughness coefficient, n, in the Manning equation for determination of a discharge

Time of Concentration – The time [Tc] required to water to flow from the farthest point on the watershed to the gaging station. The time that it takes for water to flow from the most distant part of the drainage basin to the measuring point.

¹ - New Mexico State Highway and Transportation Department Preliminary Design Bureau/Drainage Section, Drainage Manual Volume 1, Hydrology December, 1995, p. 3-19



Appendices

Appendix A - Exhibits

Exhibit 1- Vicinity Map

*Exhibit 2- Land Ownership **

Exhibit 3 - Effective FIRM 350130000

Exhibit 4- Effective FIRM 35013C0815E

Exhibit 5 - Effective FIRM 35013C0825E

Exhibit 6- Effective FIRM 35013C0930E

Exhibit 7 - Effective FIRM 3500440061A

*Exhibit 8- Drainage Basins **

Exhibit 9- Drainage System Schematic

Exhibit 10- Soil Classifications

Exhibit 11- Area Land Use

*Exhibit 12 - Existing Drainage Conditions **

*Exhibit 13- Proposed Improvements, North System **

*Exhibit 14- Proposed Improvements, Central System **

*Exhibit 15- Proposed Improvements, South System **

Appendix B - Hydrologic and Hydraulic Analyses

Appendix C - Cost Estimates

Appendix D - Public Involvement Summaries

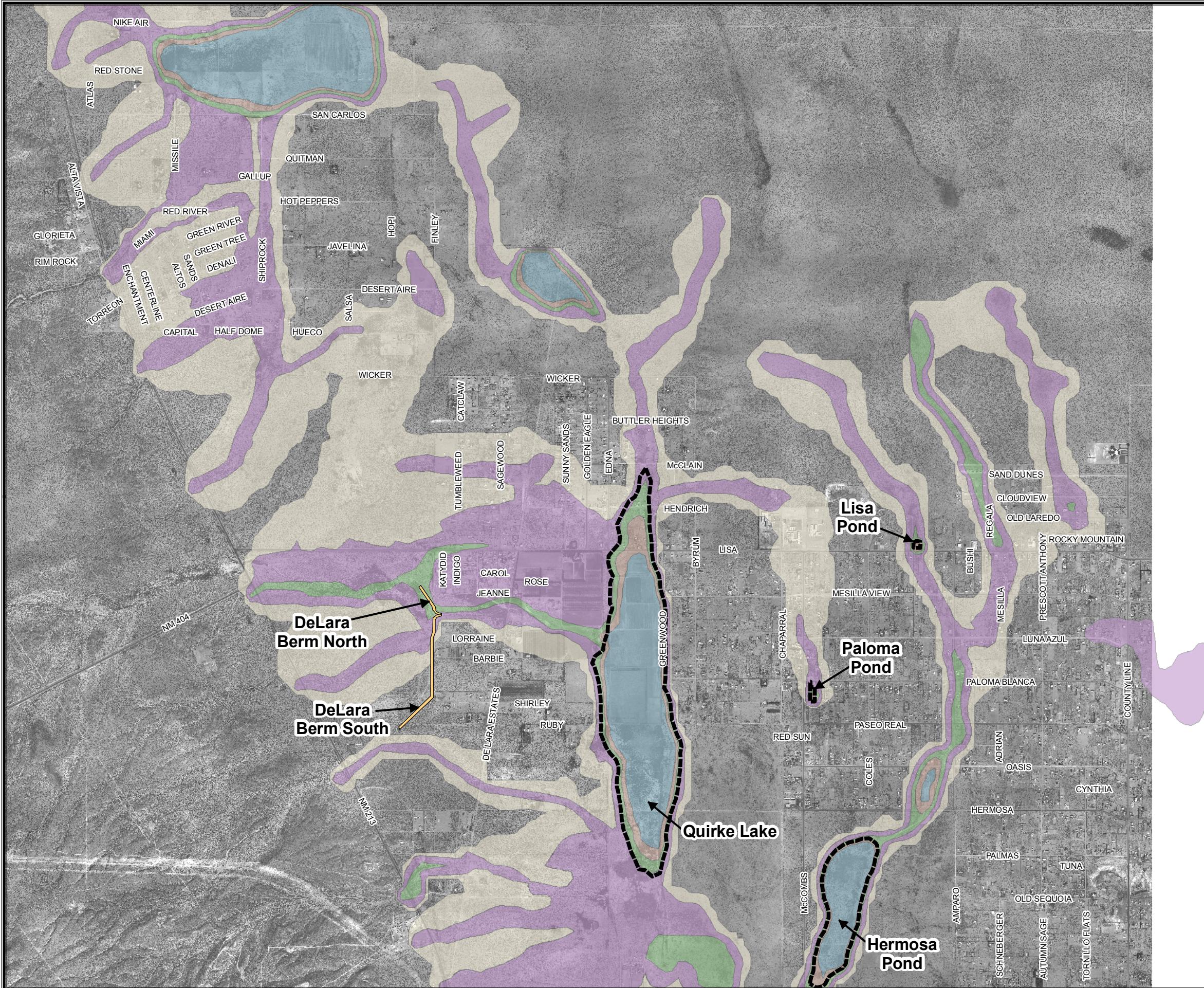
Appendix E - Information Compiled by Doña Ana Flood Commission from County Assessors Records

The Exhibits annotated above with an asterisk (*) are comprised of two versions. The one appended with an "A" is black and white (11"x17"), and the one appended with a "B" is color (22"x34"). Exhibits not annotated with an asterisk are the "A" version only, and the text of this report references the exhibits without distinguishing which version.



EXISTING DRAINAGE CONDITIONS

Exhibit 12B



Legend

Existing Flood Boundary

- Shallow Flooding - less than 1 Ft
- Shallow Flooding - 1 Ft
- Shallow Flooding - 2 Ft
- Shallow Flooding - 3 Ft
- Pond
- Existing Pond
- Existing Berm



0 1,500 3,000 6,000 FT

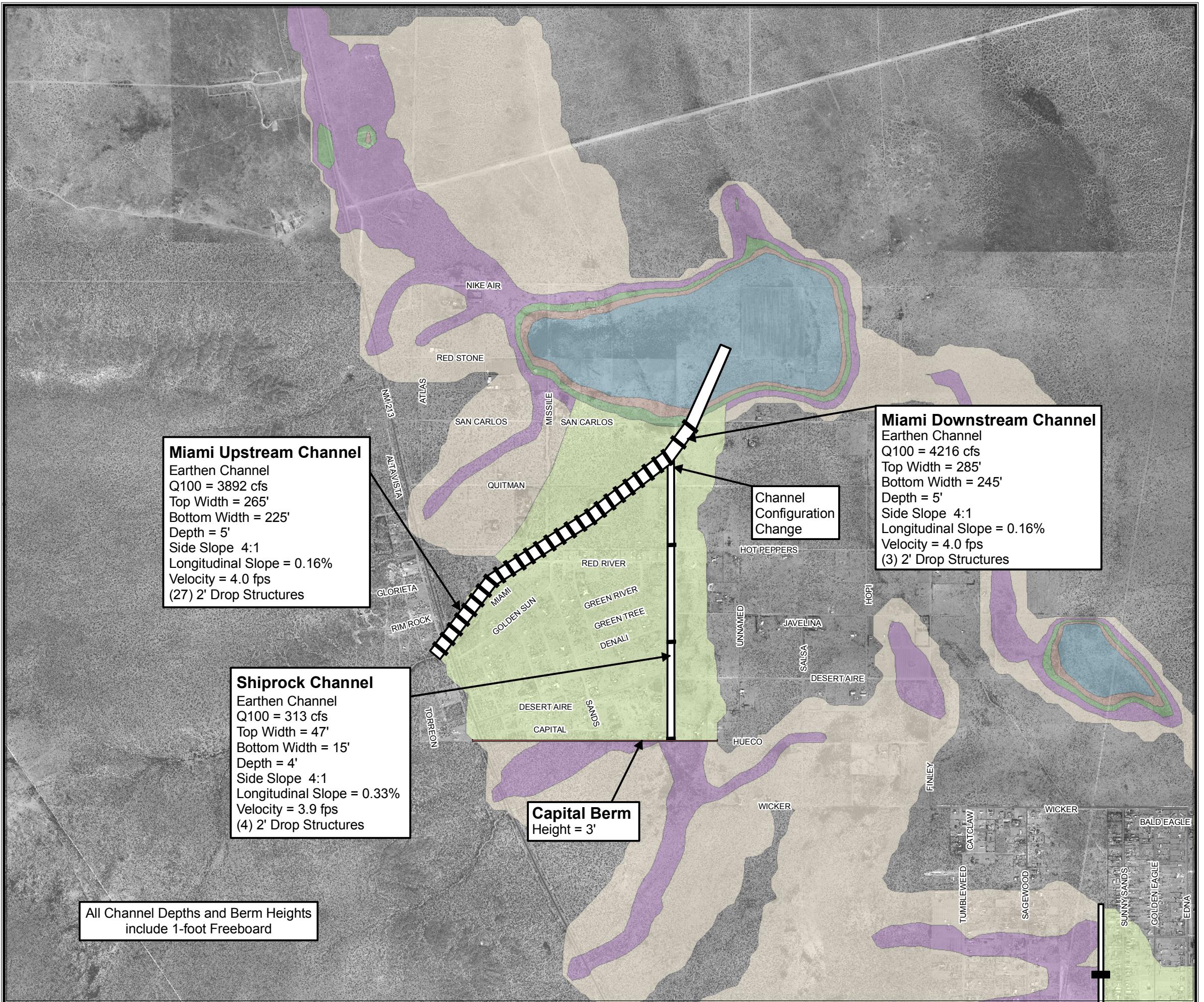
1 inch equals 1,500 feet

URS



PROPOSED IMPROVEMENT NORTH SYSTEM

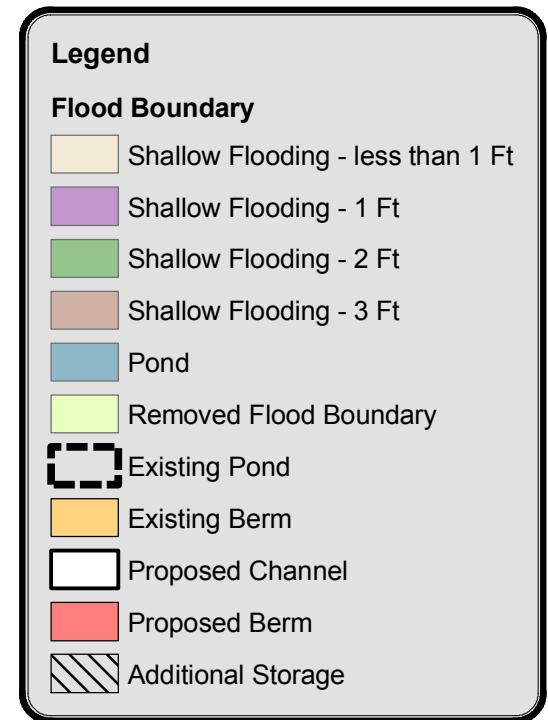
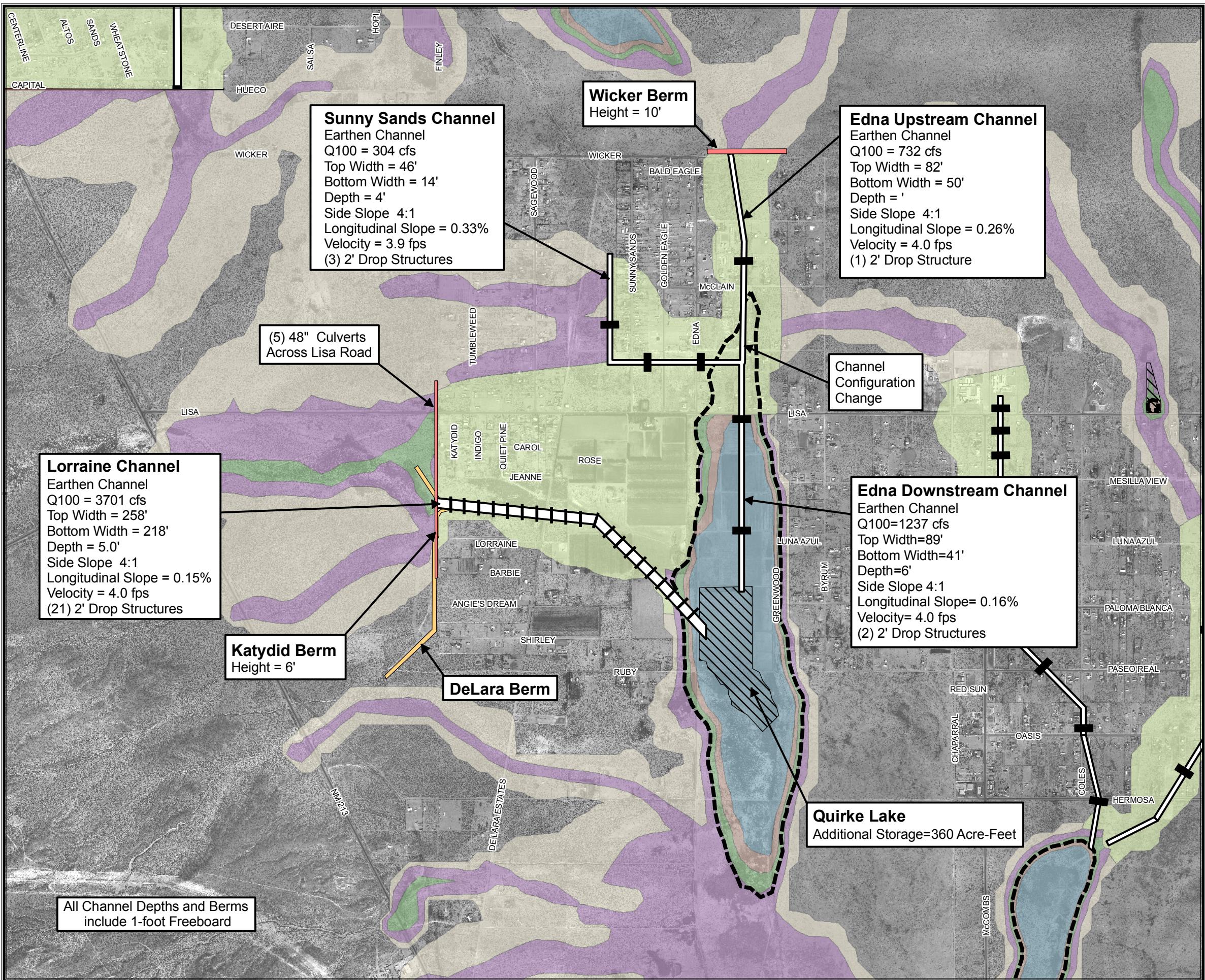
Exhibit 13B

**URS**



PROPOSED IMPROVEMENT CENTRAL SYSTEM

Exhibit 14B



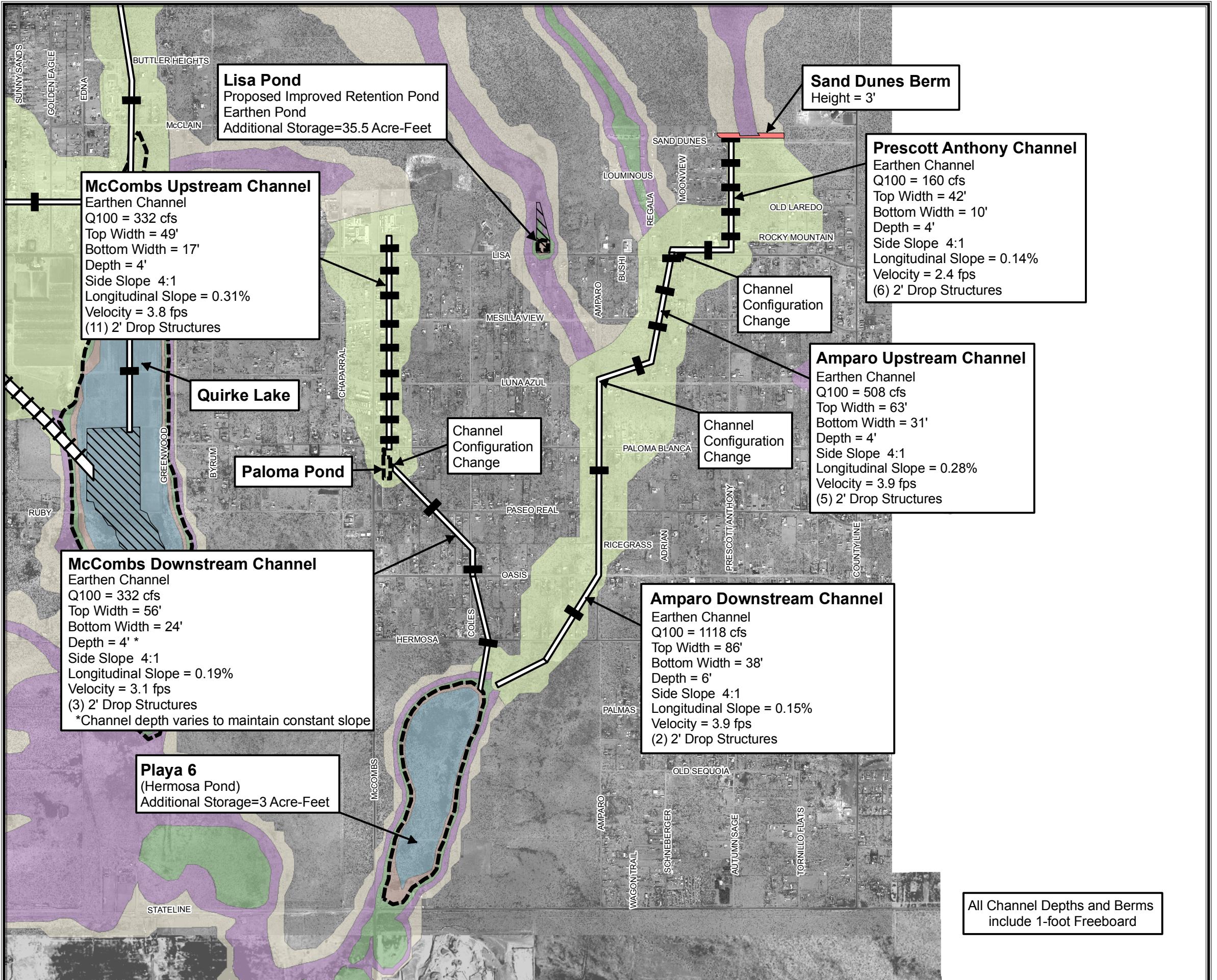
0 1,000 2,000 4,000 FT
1 inch equals 1,000 feet

URS



PROPOSED IMPROVEMENT SOUTH SYSTEM

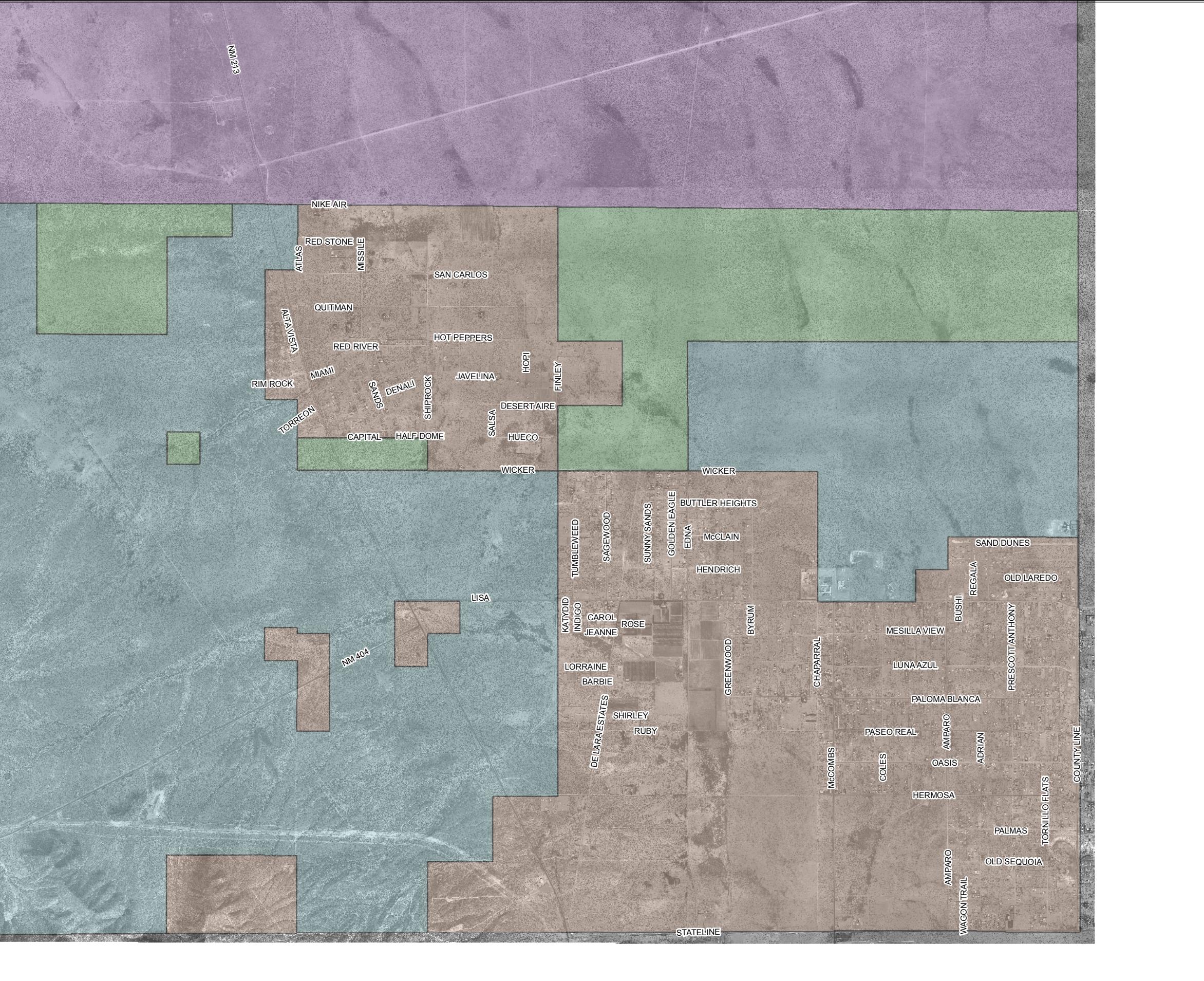
Exhibit 15B

**URS**



LAND OWNERSHIP

Exhibit 2B



Legend			
U.S. Bureau of Land Management	U.S. Department of Defense	Private	State of New Mexico



0 2,000 4,000 8,000 FT
1 inch equals 2,000 feet

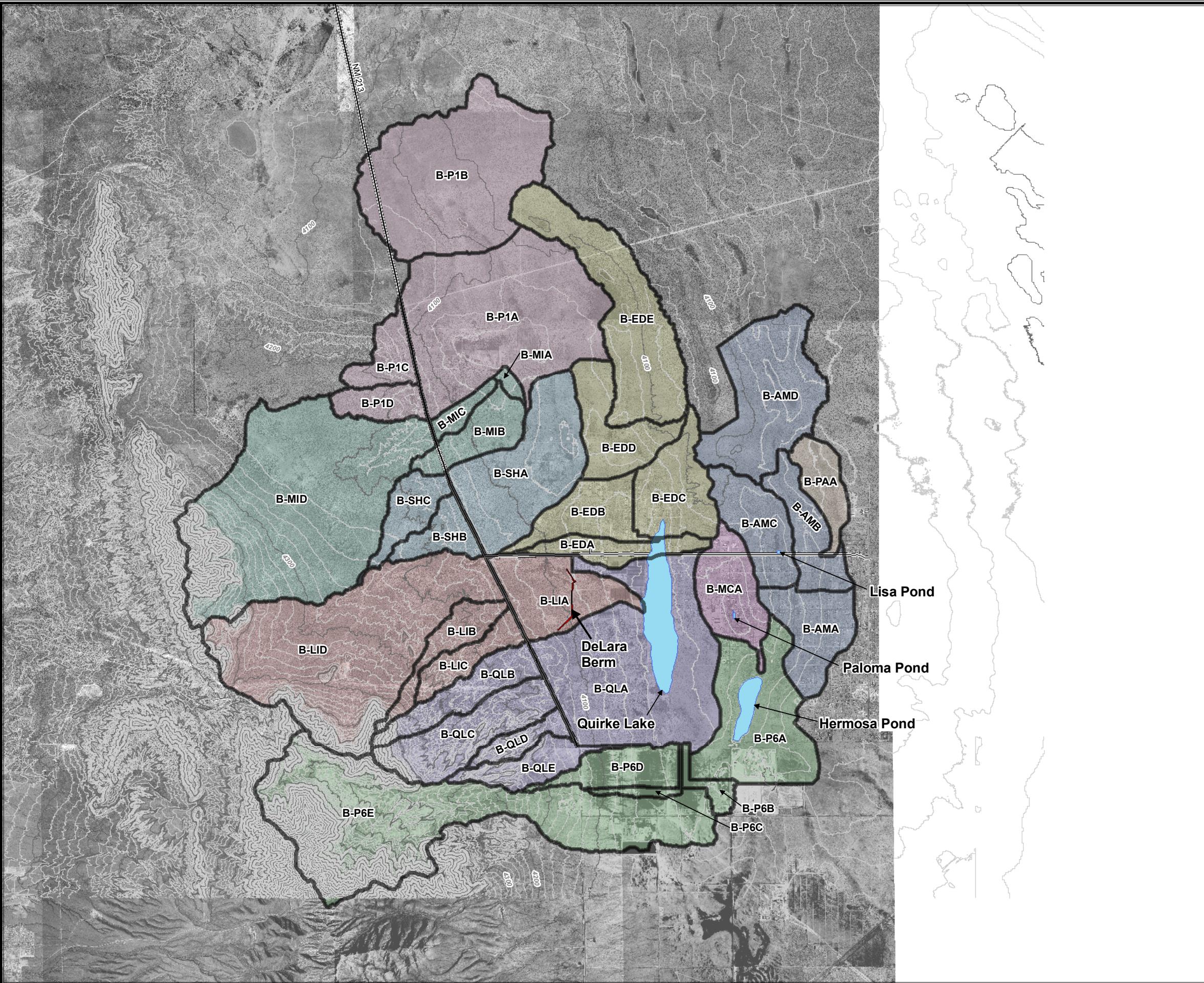
URS



DRAINAGE BASINS

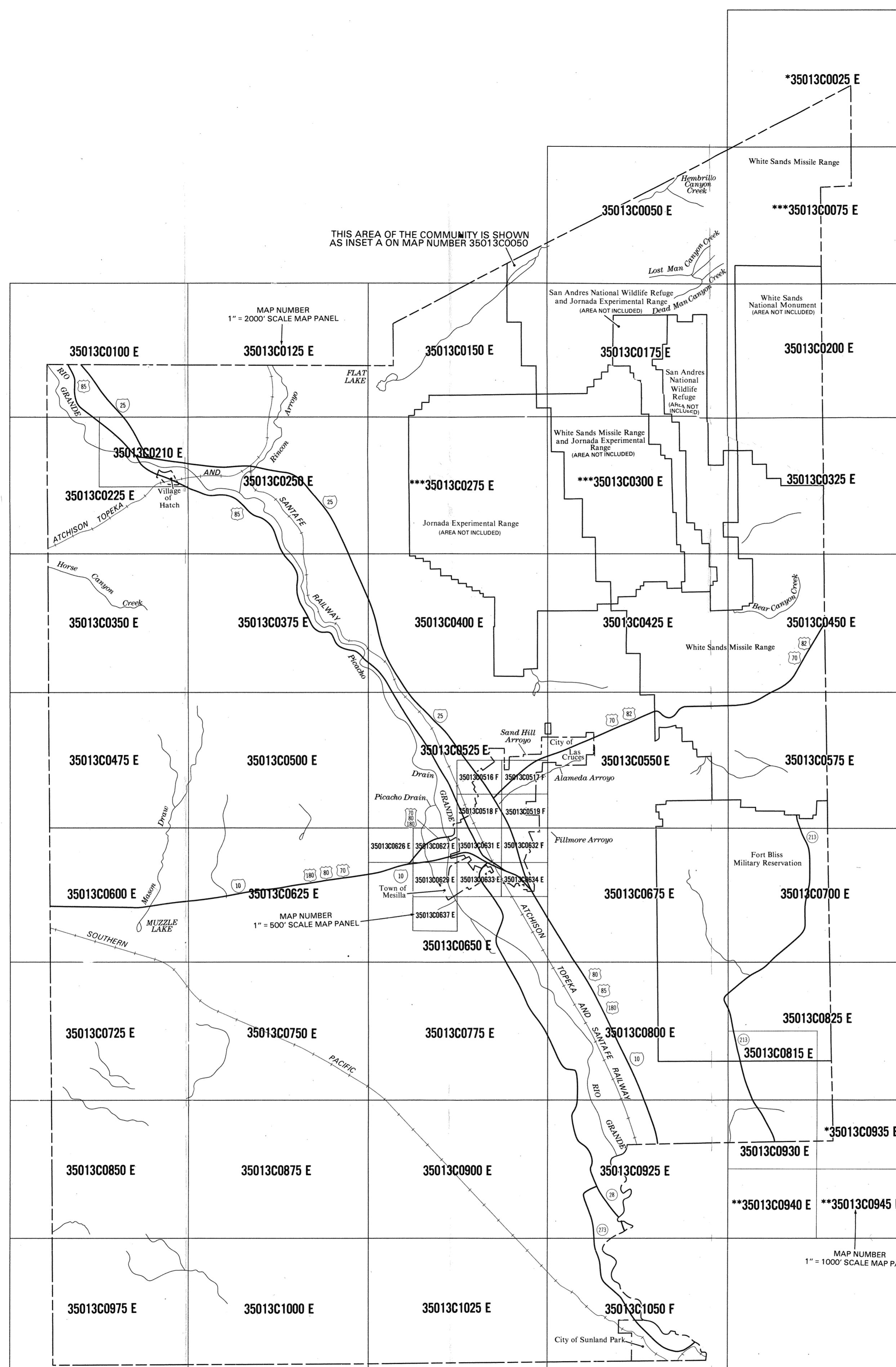
Exhibit 8B

Legend	
Drainage Basin Boundaries	
Amparo	
Edna	
Lisa	
McCombs	
Miami	
Playa 1	
Playa 6	
Prescott Anthony	
Quirke Lake	
Shiprock	
Existing Berm	
Existing Pond	
NM 213	
LISA	
Contours	
Minor Contour - 10 FT	
Major Contour - 100 FT	



N
W E S
0 3,500 7,000 14,000 FT
1 inch equals 3,500 feet

URS



* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
** PANEL NOT PRINTED - AREA OUTSIDE COUNTY BOUNDARY
*** PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS AND AREA NOT INCLUDED

LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANEL(S)	INITIAL IDENTIFICATION DATE	POST-FIRM DATE
HATCH, VILLAGE OF	350013	0210	AUGUST 16, 1974	JANUARY 3, 1986
LAS CRUCES, CITY OF	355332	0516, 0517, 0518, 0519, 0525, 0550 0627, 0629, 0631, 0632, 0633, 0634	JUNE 11, 1971	DECEMBER 31, 1974
MESILLA, TOWN OF	350113	0627, 0629, 0631, 0633, 0637	SEPTEMBER 27, 1991	SEPTEMBER 27, 1991
SUNLAND PARK, CITY OF	350147	1050	SEPTEMBER 27, 1991	SEPTEMBER 27, 1991
UNINCORPORATED AREAS	350012	ALL	JANUARY 3, 1975	SEPTEMBER 27, 1991

MAP REPOSITORIES

(Maps available for reference only, not for distribution).

VILLAGE OF HATCH
Hatch City Hall
112 Franklin Street
P.O. Box 220
Hatch, New Mexico 87937

CITY OF LAS CRUCES
200 North Church Street
Las Cruces, New Mexico 88001

TOWN OF MESILLA
Town Clerk's Office
Mesilla Town Hall
Calle de Parian
P.O. Box 10
Mesilla, New Mexico 88046

CITY OF SUNLAND PARK
Sunland Park City Hall
3400 McNutt Road
Sunland Park, New Mexico 88063

DONA ANA COUNTY
(UNINCORPORATED AREAS)
108 West Amador
Las Cruces, New Mexico 88001



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

DONA ANA COUNTY,
NEW MEXICO AND
INCORPORATED AREAS

(SEE TABLE SHOWN ABOVE FOR
LISTINGS OF COMMUNITIES)

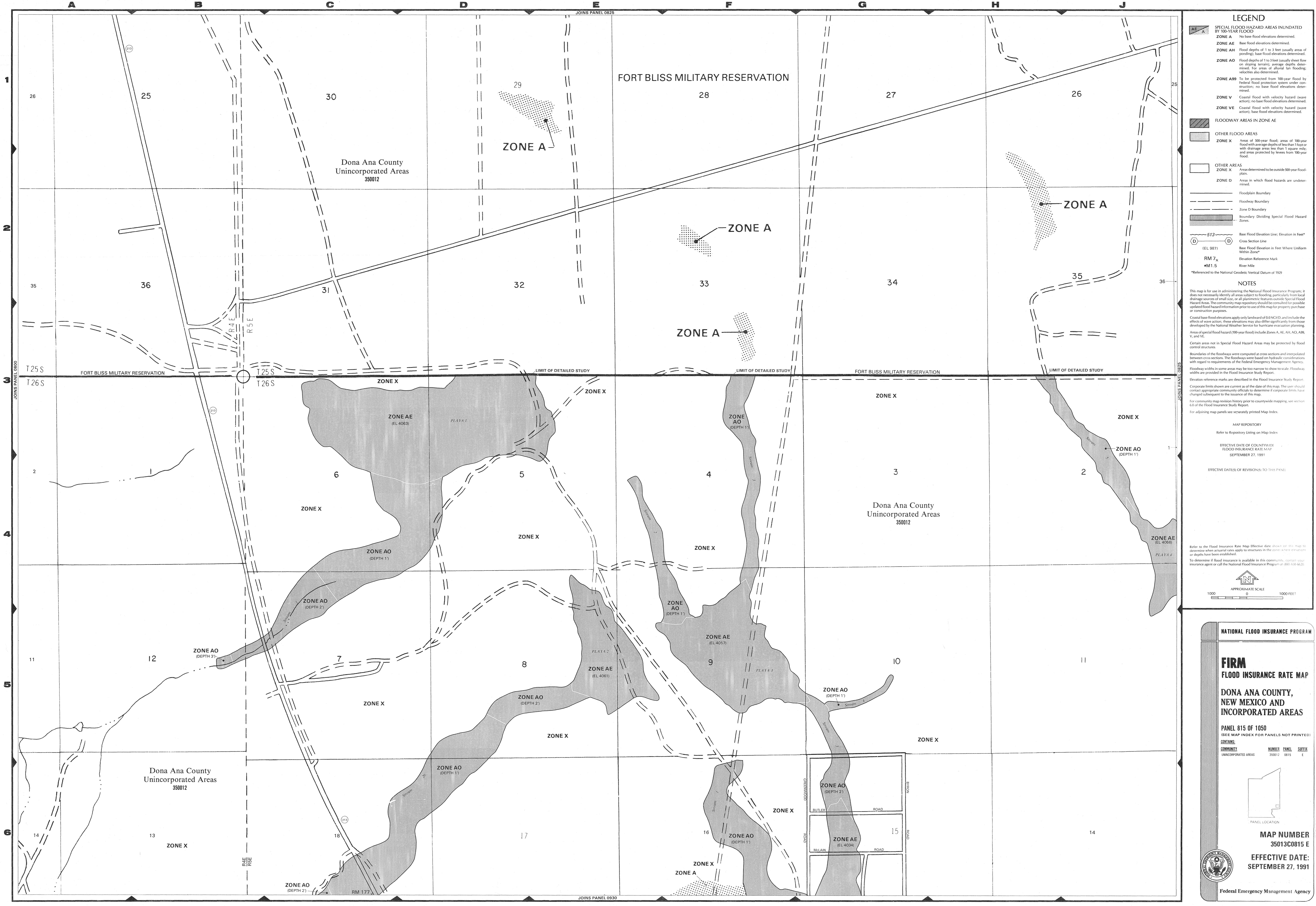
MAP INDEX

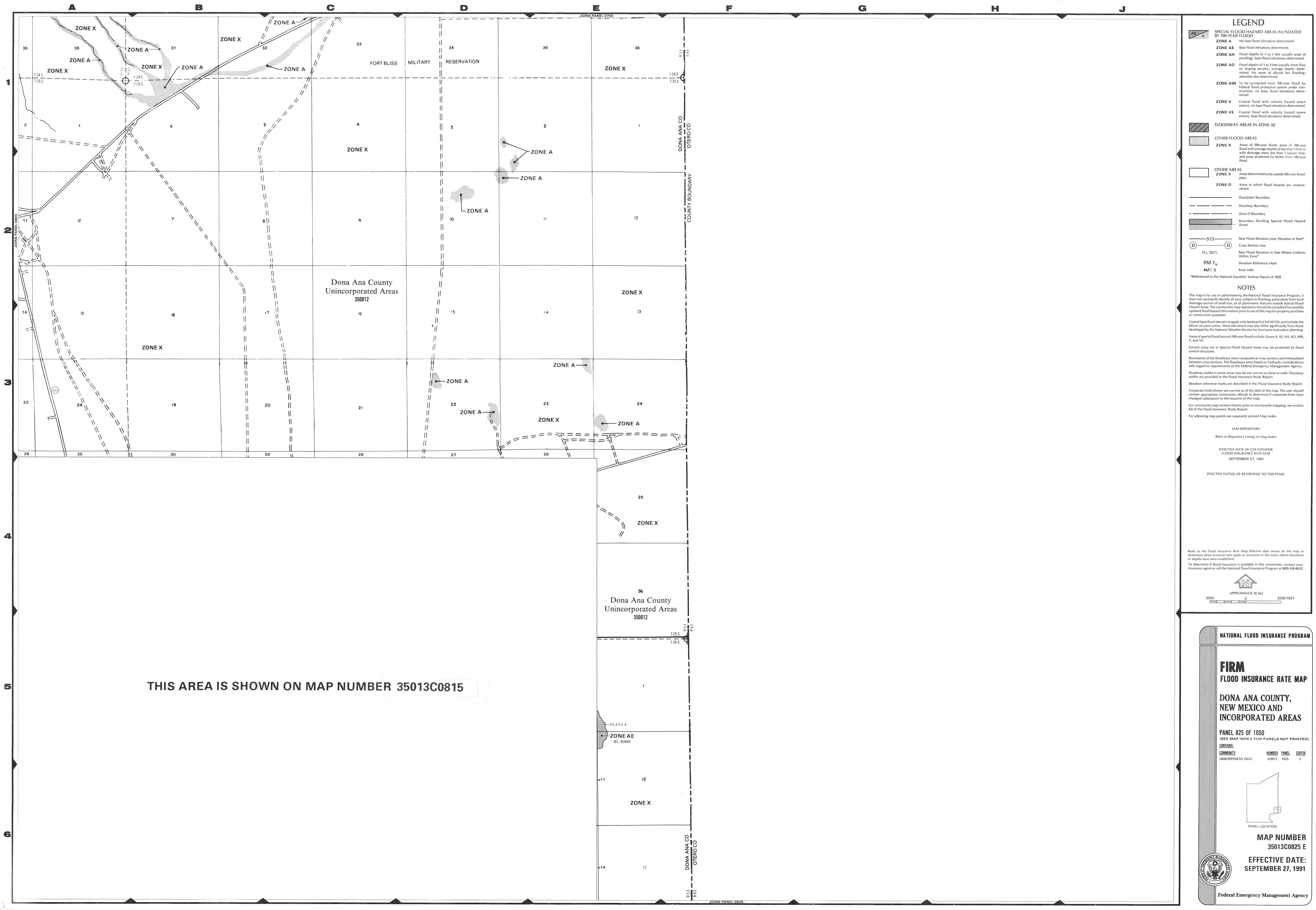
PANELS PRINTED: 50, 100, 125, 150, 175,
200, 225, 250, 275, 300, 325, 350, 375, 400,
425, 450, 475, 500, 516, 517, 518, 519,
525, 550, 575, 600, 625, 626, 627, 629,
631, 632, 633, 634, 637, 650, 675, 700,
725, 750, 775, 800, 815, 825, 850, 875,
900, 925, 930, 975, 1000, 1025, 1050

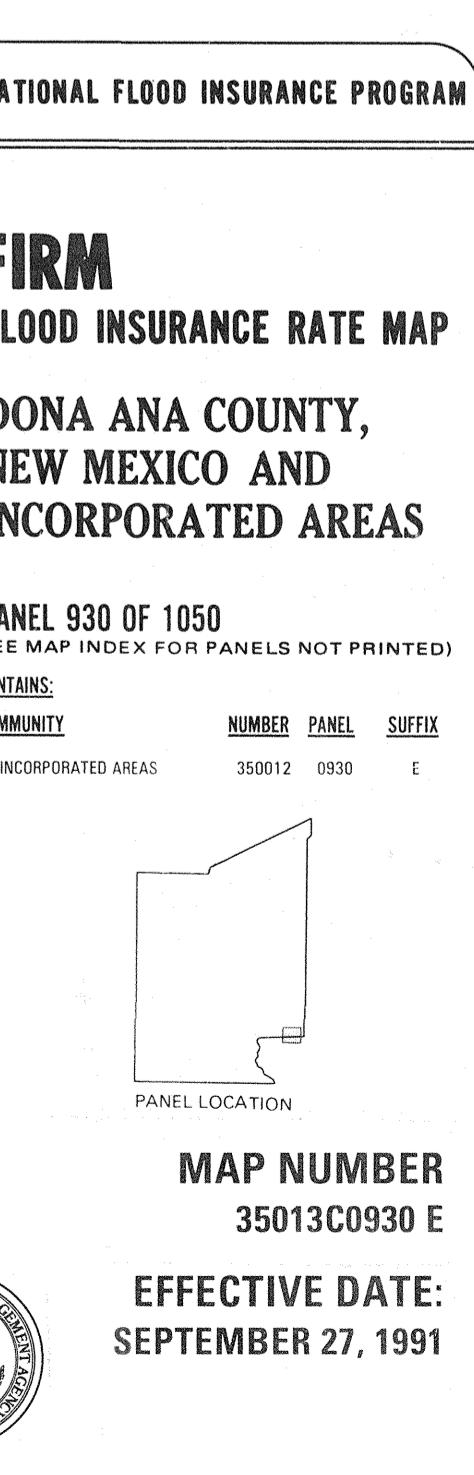
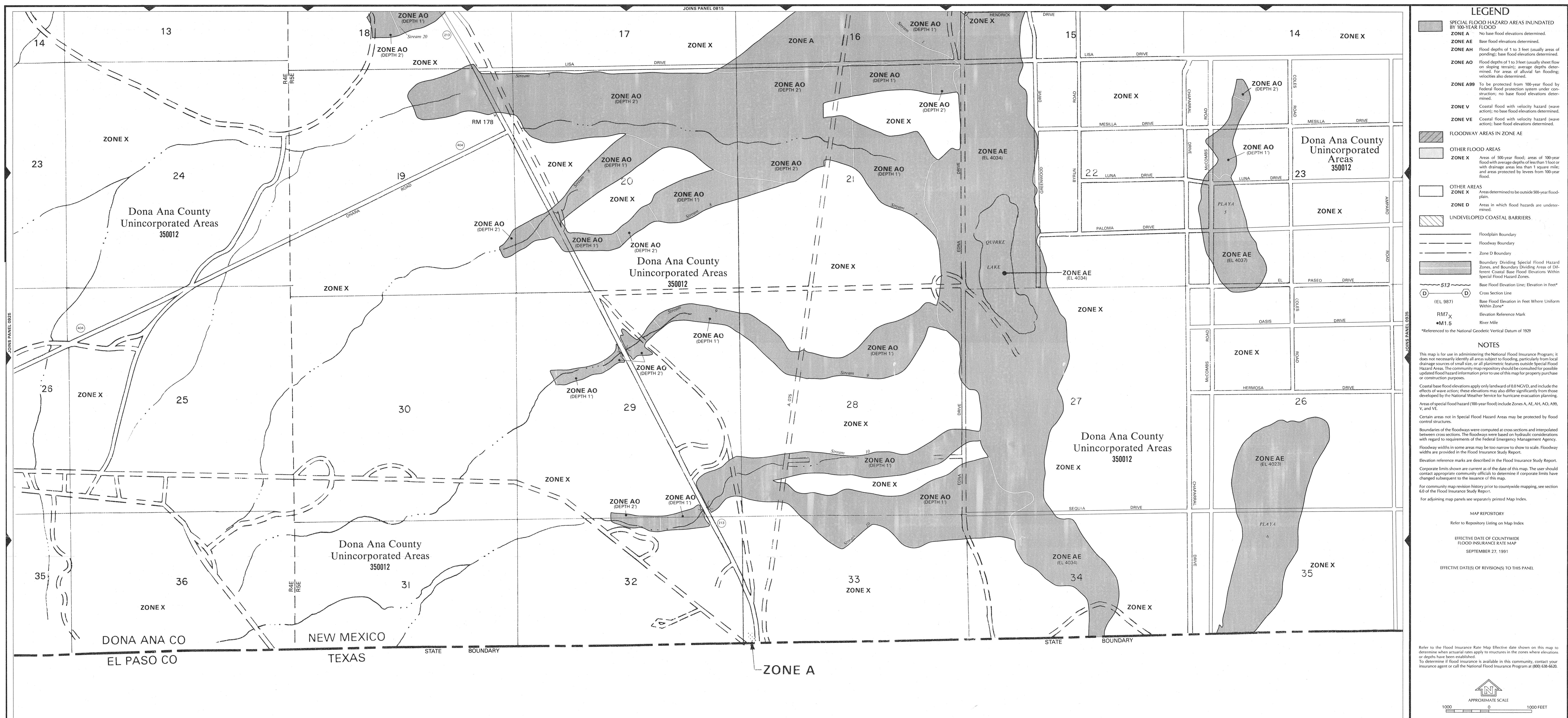
MAP NUMBER
35013C0000

MAP REVISED:
SEPTEMBER 6, 1995









LEGEND

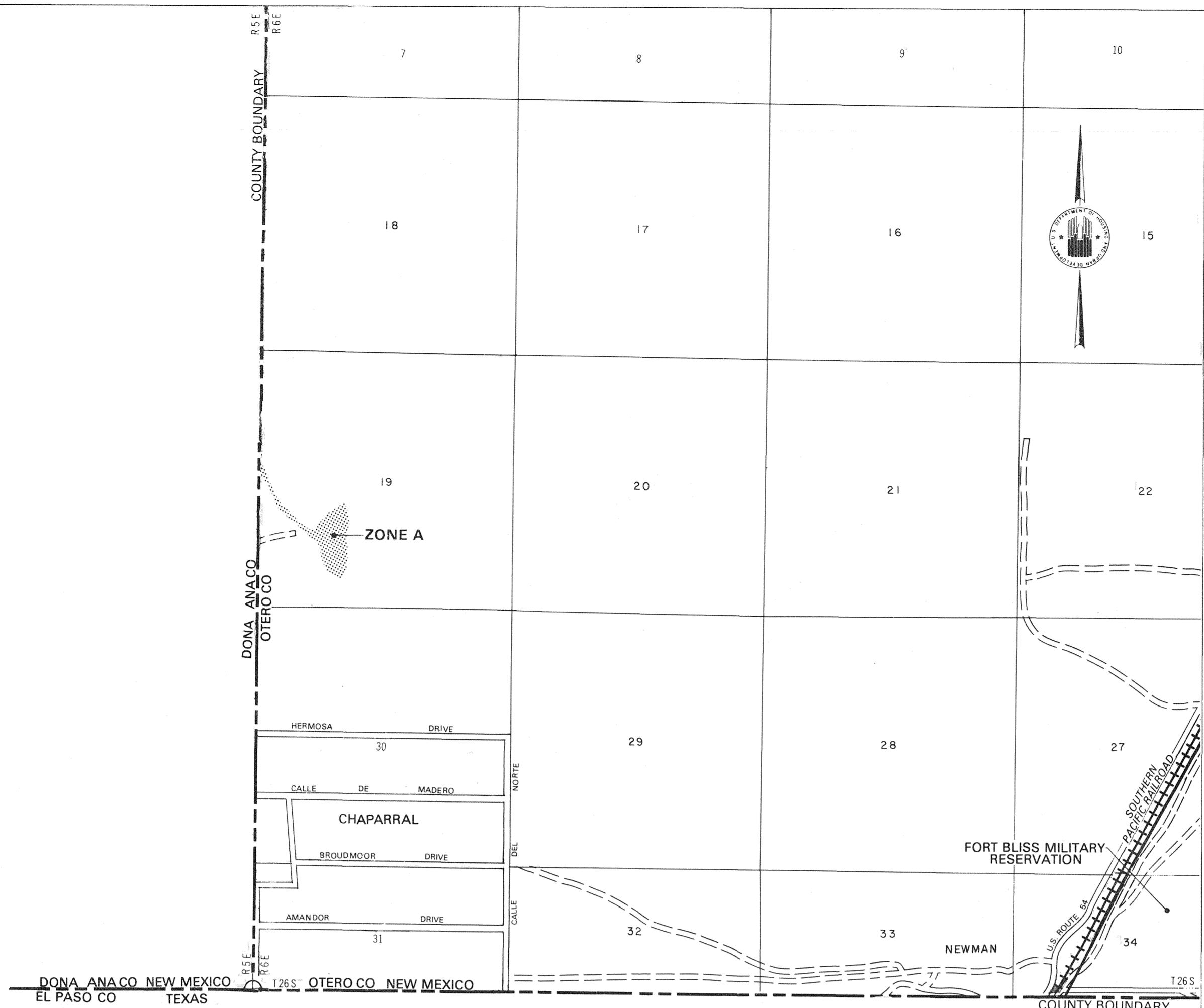
SPECIAL FLOOD HAZARD AREA

ZONE A

Note: These maps may not include all Special Flood Hazard Areas in the community. After a more detailed study, the Special Flood Hazard Areas shown on these maps may be modified, and other areas added.

TO DETERMINE IF FLOOD INSURANCE IS AVAILABLE IN THIS COMMUNITY, CONTACT YOUR INSURANCE AGENT, OR CALL THE NATIONAL FLOOD INSURANCE PROGRAM, AT (800) 638-6620, OR (800) 424-8872.

APPROXIMATE SCALE IN FEET
2000 0 2000

**FLOOD HAZARD BOUNDARY MAP****OTERO COUNTY,
NEW MEXICO**

UNINCORPORATED AREA

PAGE 61 OF 68

(SEE MAP INDEX FOR PAGES NOT PRINTED)

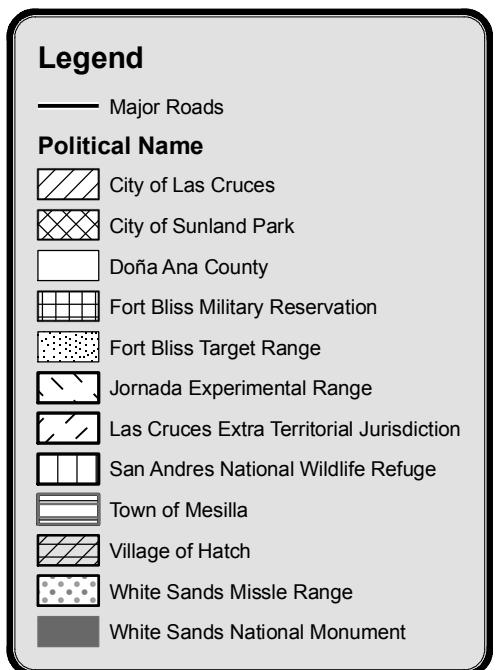
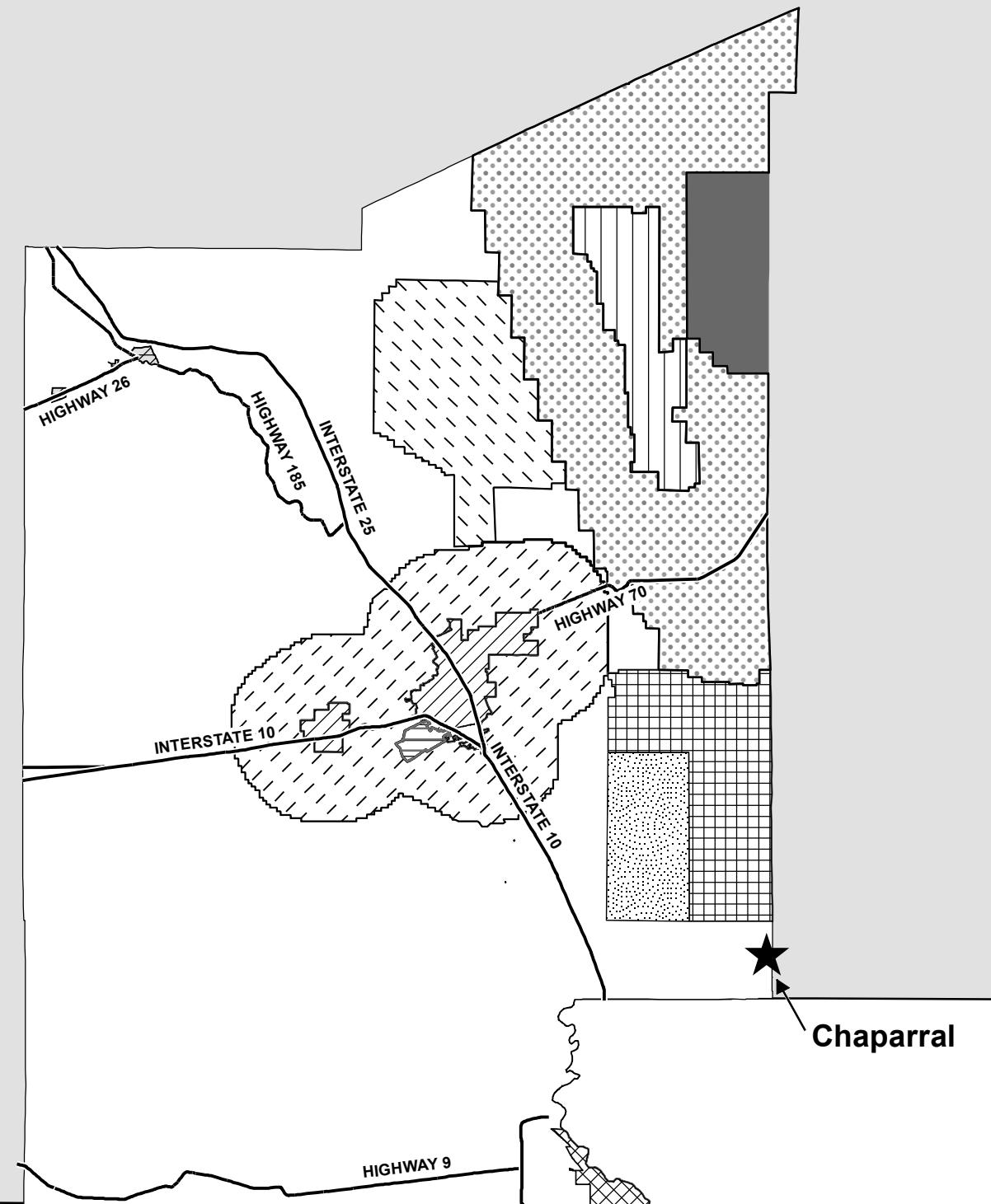
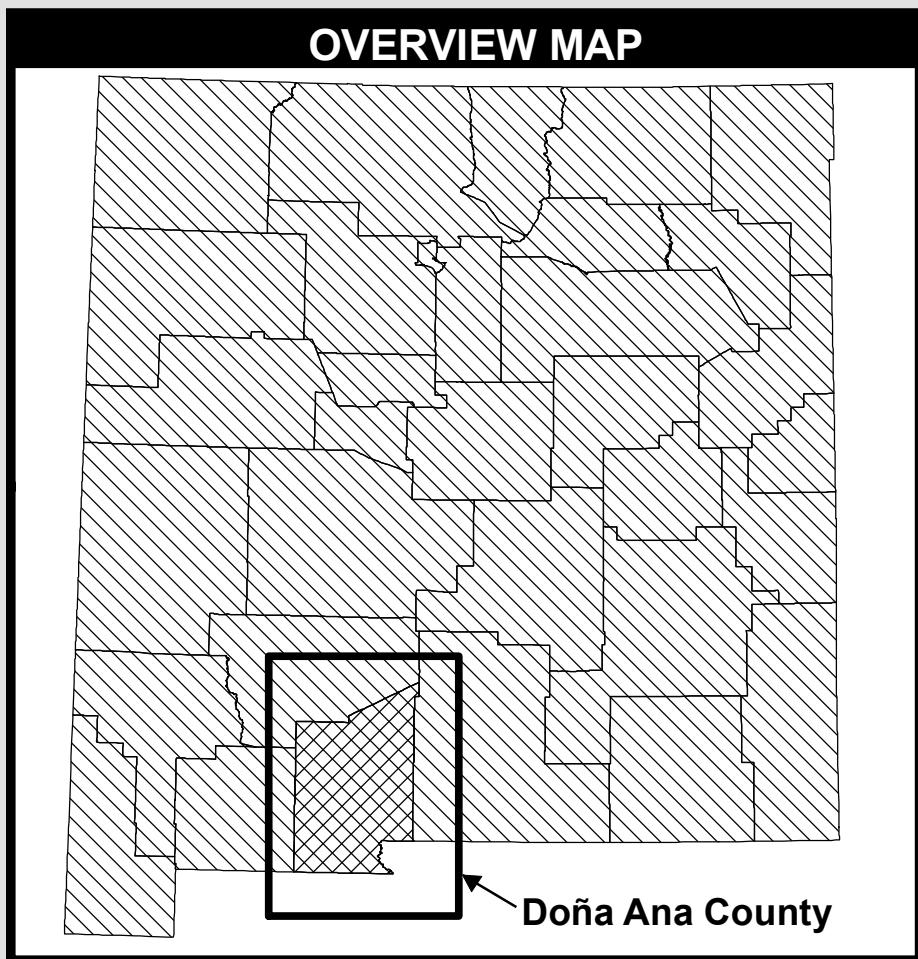
MAP REVISED:
AUGUST 22, 1978

CONVERTED BY LETTER
EFFECTIVE 8/1/87

COMMUNITY-PANEL NO.
350044 0061 A



U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION



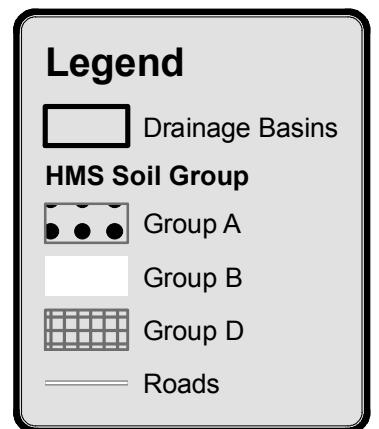
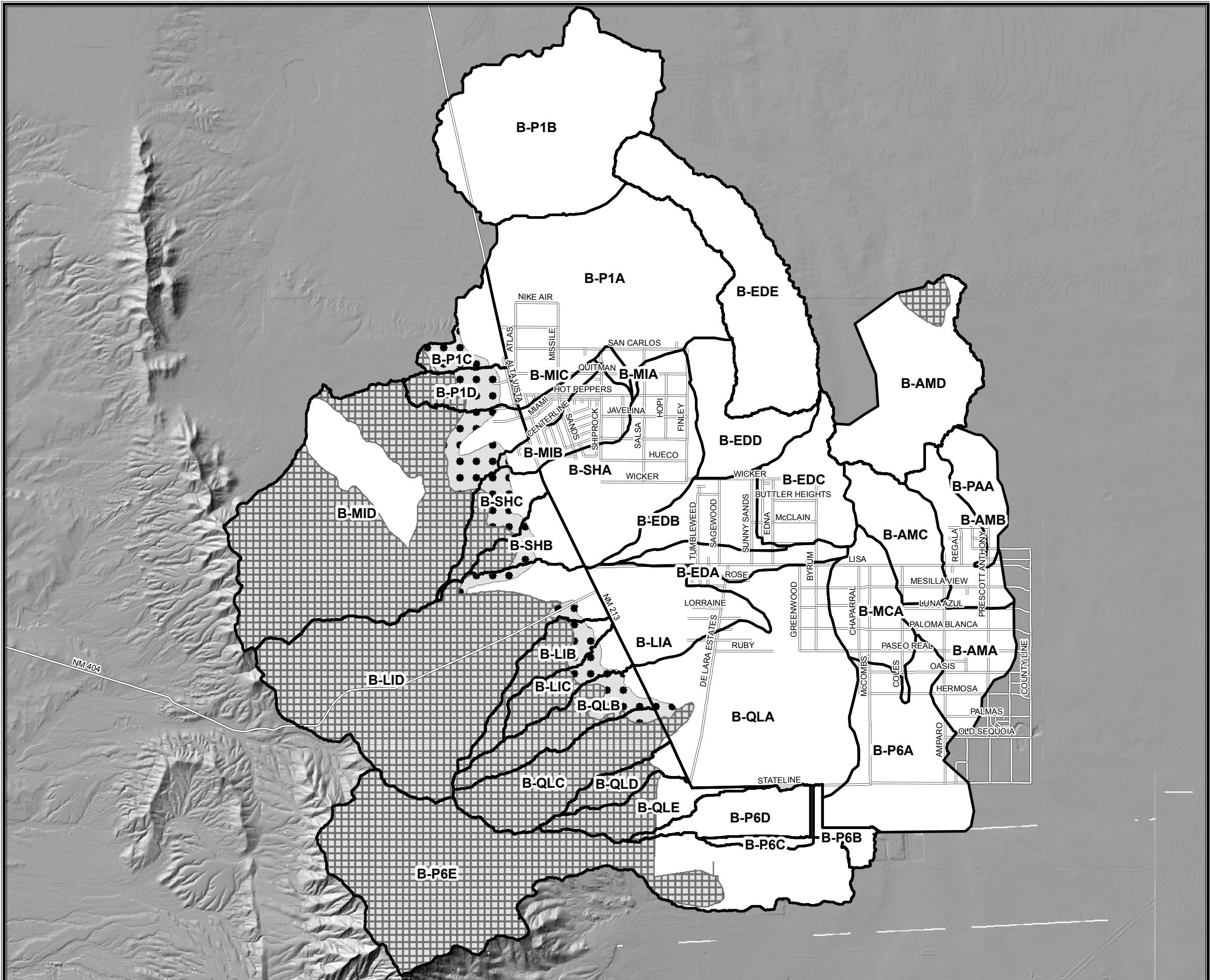
0 30,000 60,000 120,000 FT
1 inch equals 60,000 feet

URS



SOIL CLASSIFICATION

Exhibit 10



0 3,000 6,000 12,000 FT

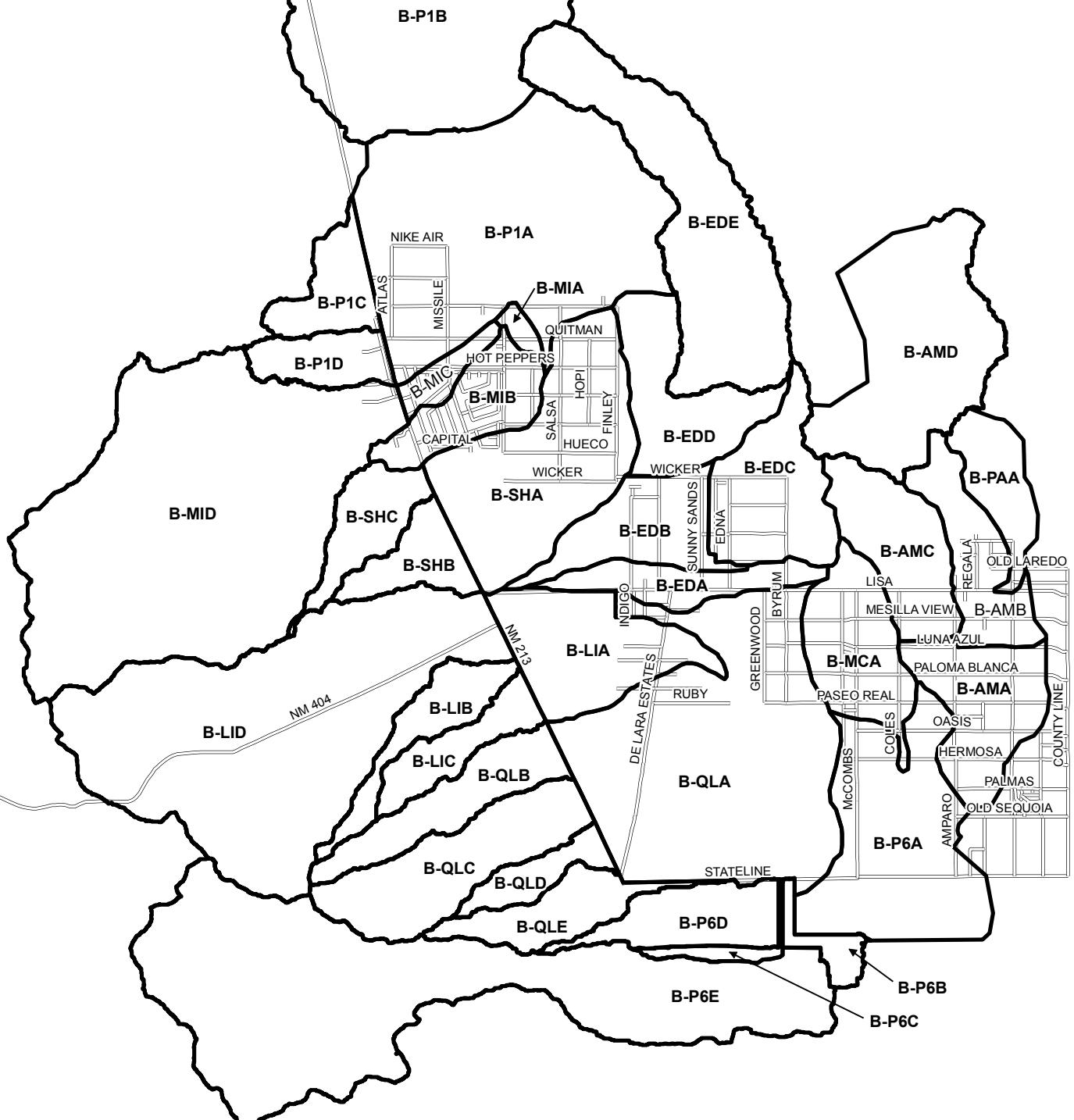
1 inch equals 6,000 feet

URS



AREA LAND USE

Exhibit 11



Basin Name	Land Use	Percent Coverage
B-AMA	Bare Rock/Sand/Clay	0.14%
	Commercial	0.18%
	Desert Shrub	82.69%
	Grassland	0.10%
	High Intensity Residential	0.27%
	Low Intensity Residential	16.62%
B-AMB	Desert Shrub	95.44%
	High Intensity Residential	0.59%
	Low Intensity Residential	3.97%
B-AMC	Desert Shrub	93.02%
	Grassland	0.93%
	Low Intensity Residential	6.05%
B-AMD	Desert Shrub	96.16%
	Low Intensity Residential	3.53%
	Row Crops	0.32%
B-EDA	Commercial	0.04%
	Desert Shrub	80.91%
	Grassland	0.18%
	High Intensity Residential	4.07%
	Low Intensity Residential	11.71%
	Row Crops	3.09%
B-EDB	Desert Shrub	94.53%
	Grassland	1.54%
	High Intensity Residential	0.87%
	Low Intensity Residential	3.06%
B-EDC	Commercial	0.05%
	Desert Shrub	90.74%
	Grassland	1.10%
	Low Intensity Residential	8.11%
B-EDD	Desert Shrub	92.55%
	Low Intensity Residential	6.42%
	Row Crops	1.03%
B-EDE	Bare Rock/Sand/Clay	0.14%
	Desert Shrub	97.58%
	Grassland	0.46%
	Low Intensity Residential	1.79%
	Row Crops	0.03%
B-LIA	Desert Shrub	83.98%
	Grassland	3.02%
	High Intensity Residential	0.13%
	Low Intensity Residential	6.78%
	Row Crops	6.09%
B-LIB	Desert Shrub	99.89%
	Grassland	0.11%
B-LIC	Desert Shrub	98.85%
	Grassland	1.15%
B-LID	Bare Rock/Sand/Clay	0.04%
	Desert Shrub	93.94%
	Grassland	3.50%
	High Intensity Residential	0.18%
	Low Intensity Residential	2.31%
	Row Crops	0.03%
B-MCA	Bare Rock/Sand/Clay	0.58%
	Commercial	0.58%
	Desert Shrub	76.17%
	Grassland	2.87%
	High Intensity Residential	5.64%
	Low Intensity Residential	12.92%
	Row Crops	1.23%
B-MIA	Desert Shrub	75.61%
	Low Intensity Residential	24.39%
B-MIB	Desert Shrub	69.00%
	Grassland	0.56%
	Low Intensity Residential	30.08%
	Row Crops	0.37%
B-MIC	Desert Shrub	65.22%
	Grassland	0.03%
	High Intensity Residential	0.22%
	Low Intensity Residential	34.53%
B-MID	Desert Shrub	97.22%
	Grassland	2.65%
	Low Intensity Residential	0.13%
B-SHA	Desert Shrub	83.11%
	Grassland	0.33%
	Low Intensity Residential	15.01%
	Row Crops	1.55%
B-SHB	Desert Shrub	98.31%
	Low Intensity Residential	1.69%
B-SHC	Desert Shrub	100.00%

Legend

	Drainage Basins
	Roads



0 3,500 7,000 14,000 FT

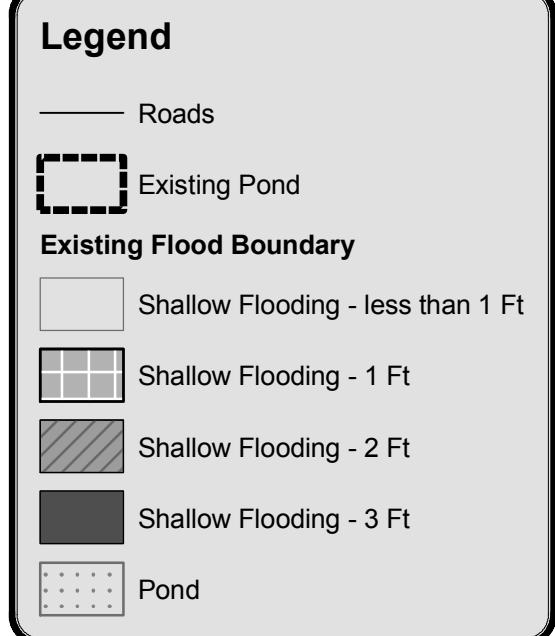
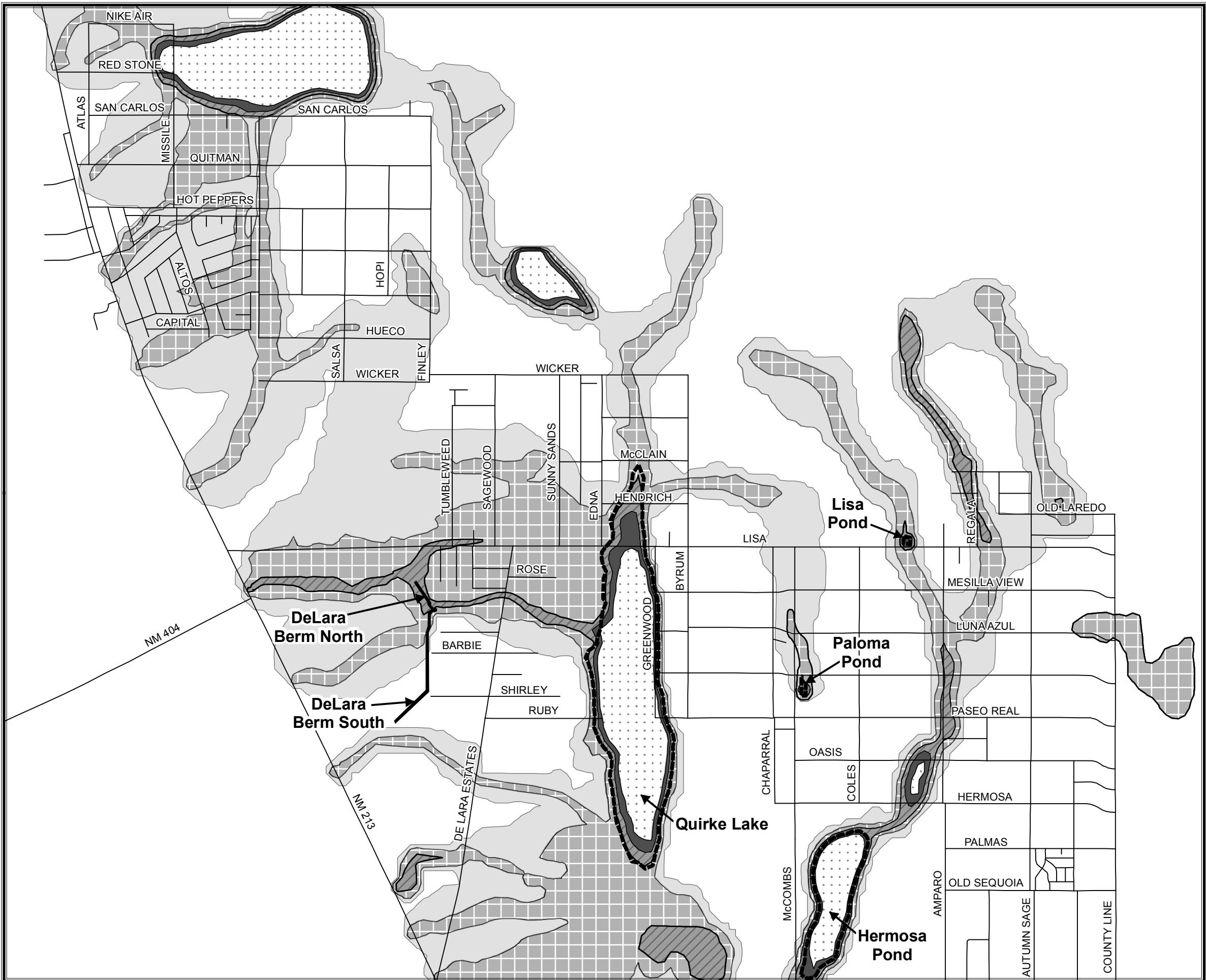
1 inch equals 7,000 feet

URS



EXISTING DRAINAGE CONDITIONS

Exhibit 12A



0 1,500 3,000 6,000 FT

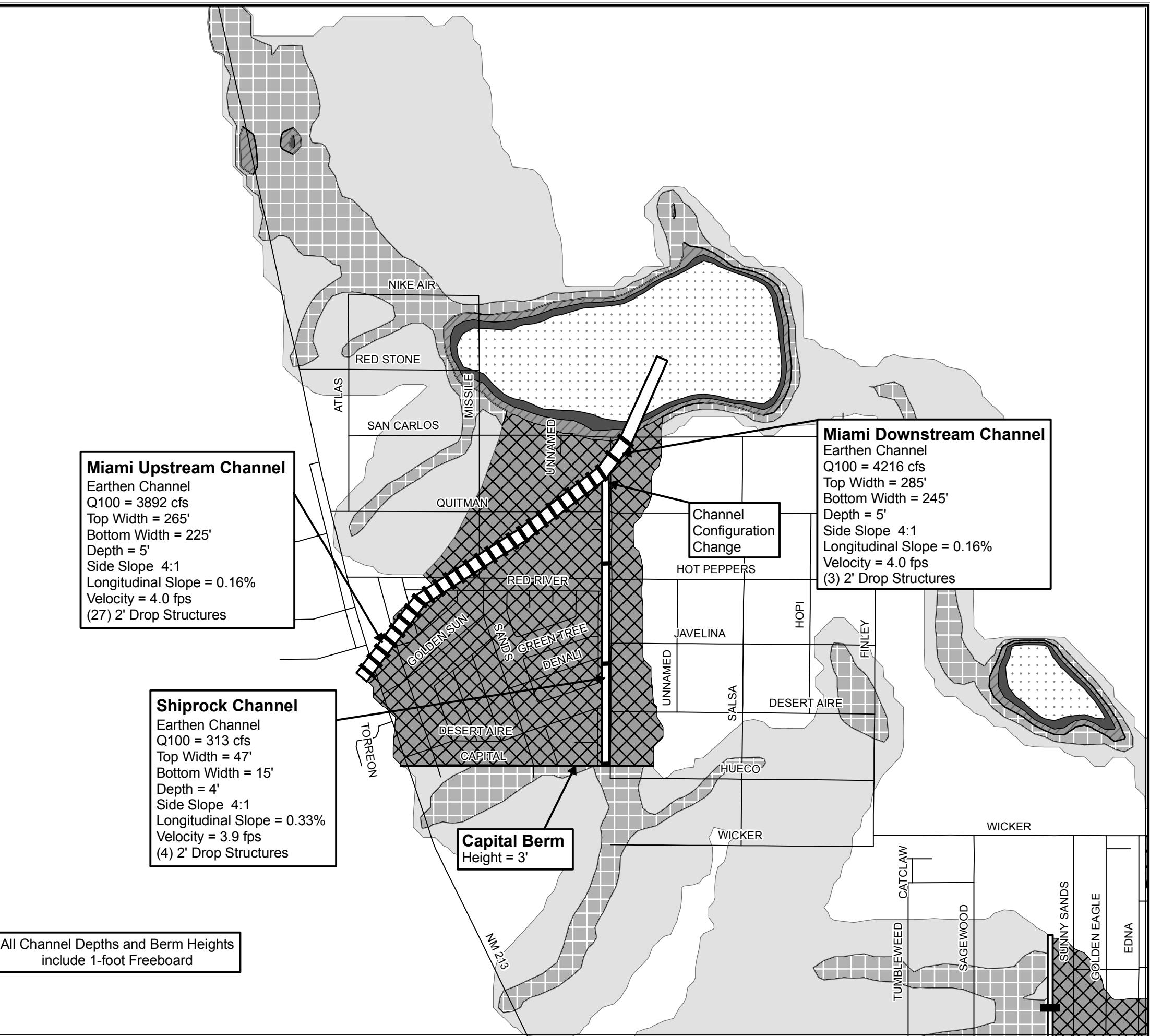
1 inch equals 3,000 feet

URS



PROPOSED IMPROVEMENT NORTH SYSTEM

Exhibit 13A



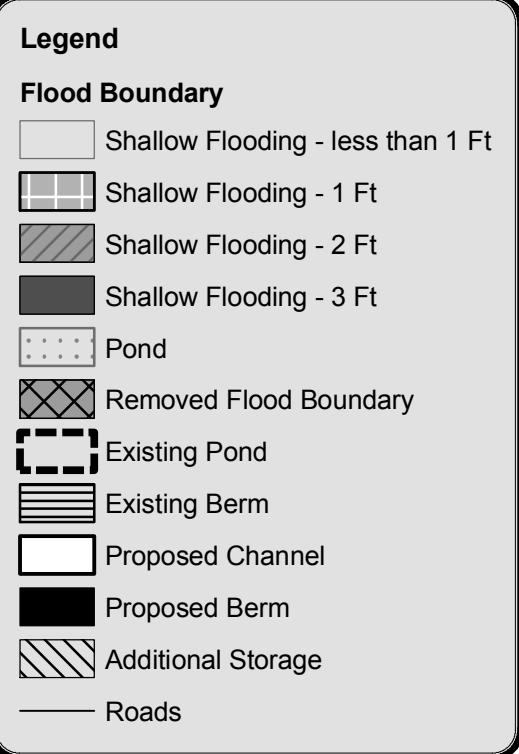
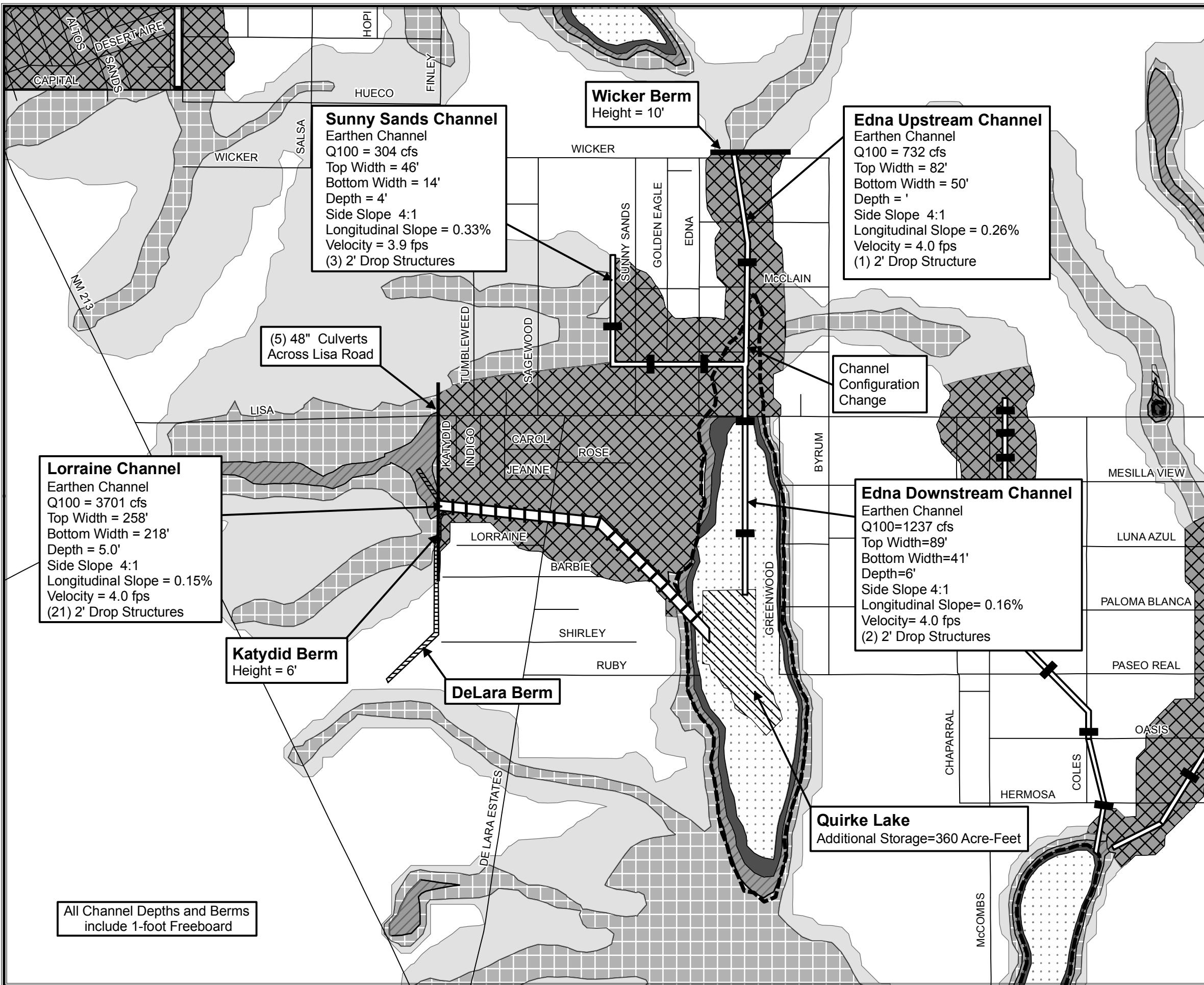
0 1,000 2,000 4,000 Ft
1 inch equals 2,000 feet

URS



PROPOSED IMPROVEMENT CENTRAL SYSTEM

Exhibit 14A



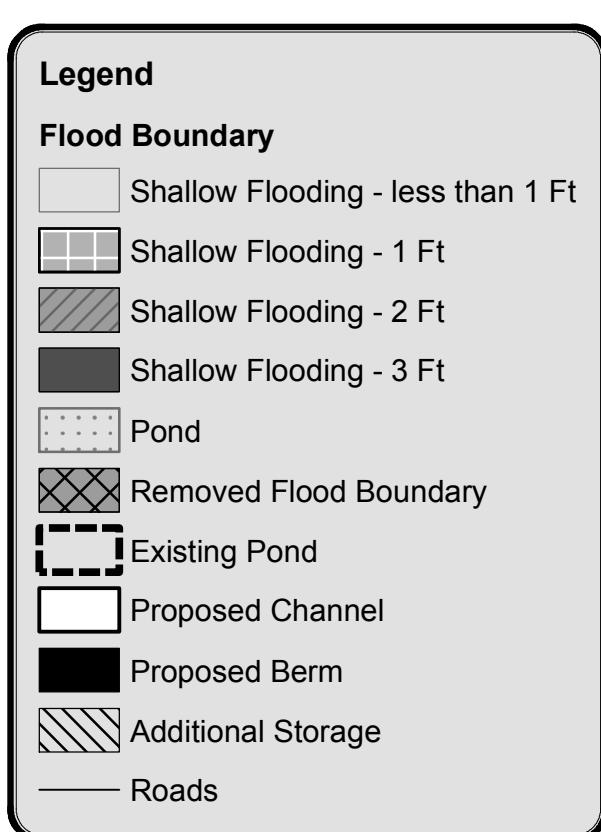
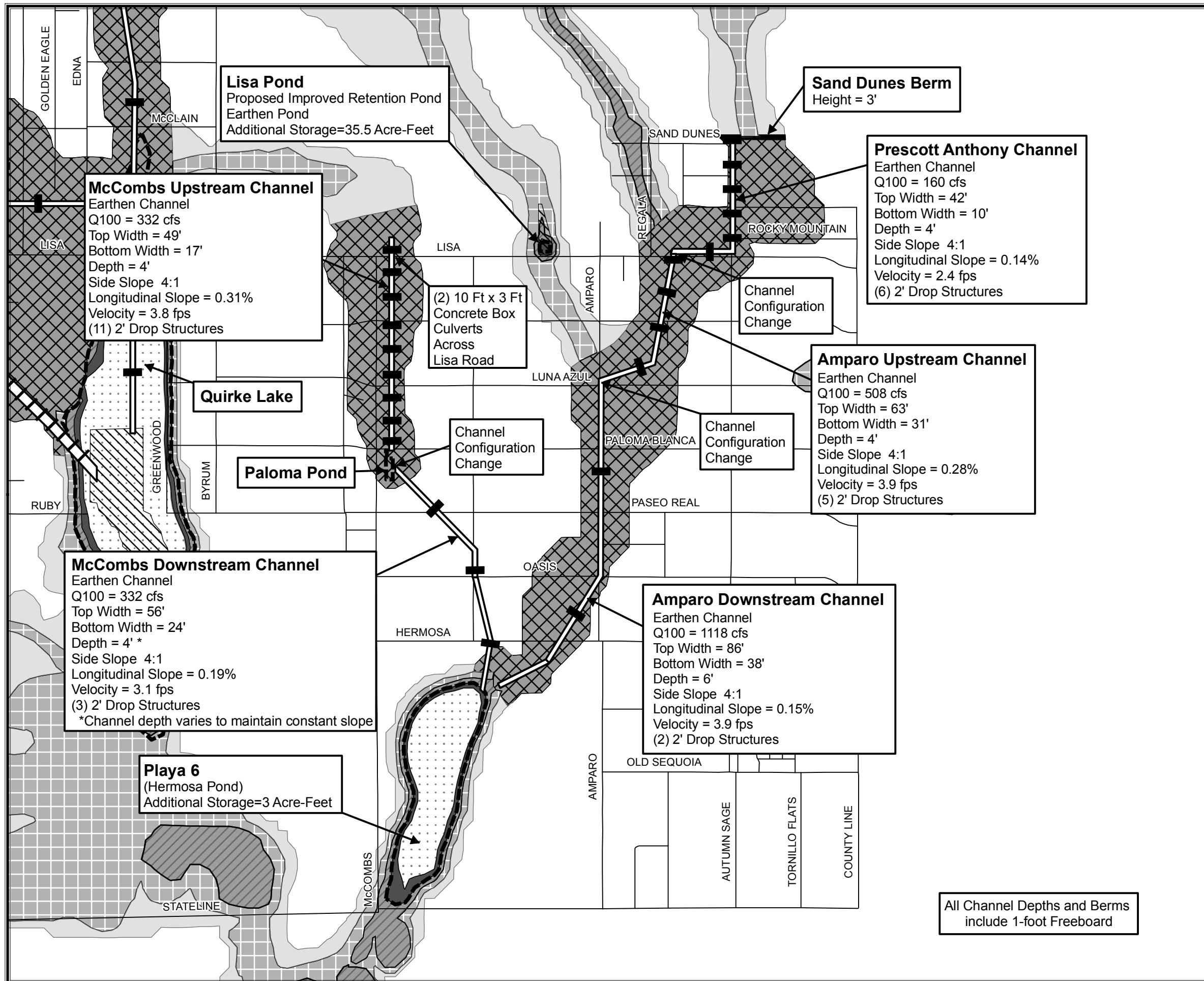
0 1,000 2,000 4,000 FT
1 inch equals 2,000 feet

URS



PROPOSED IMPROVEMENT SOUTH SYSTEM

Exhibit 15A



0 1,000 2,000 4,000Ft

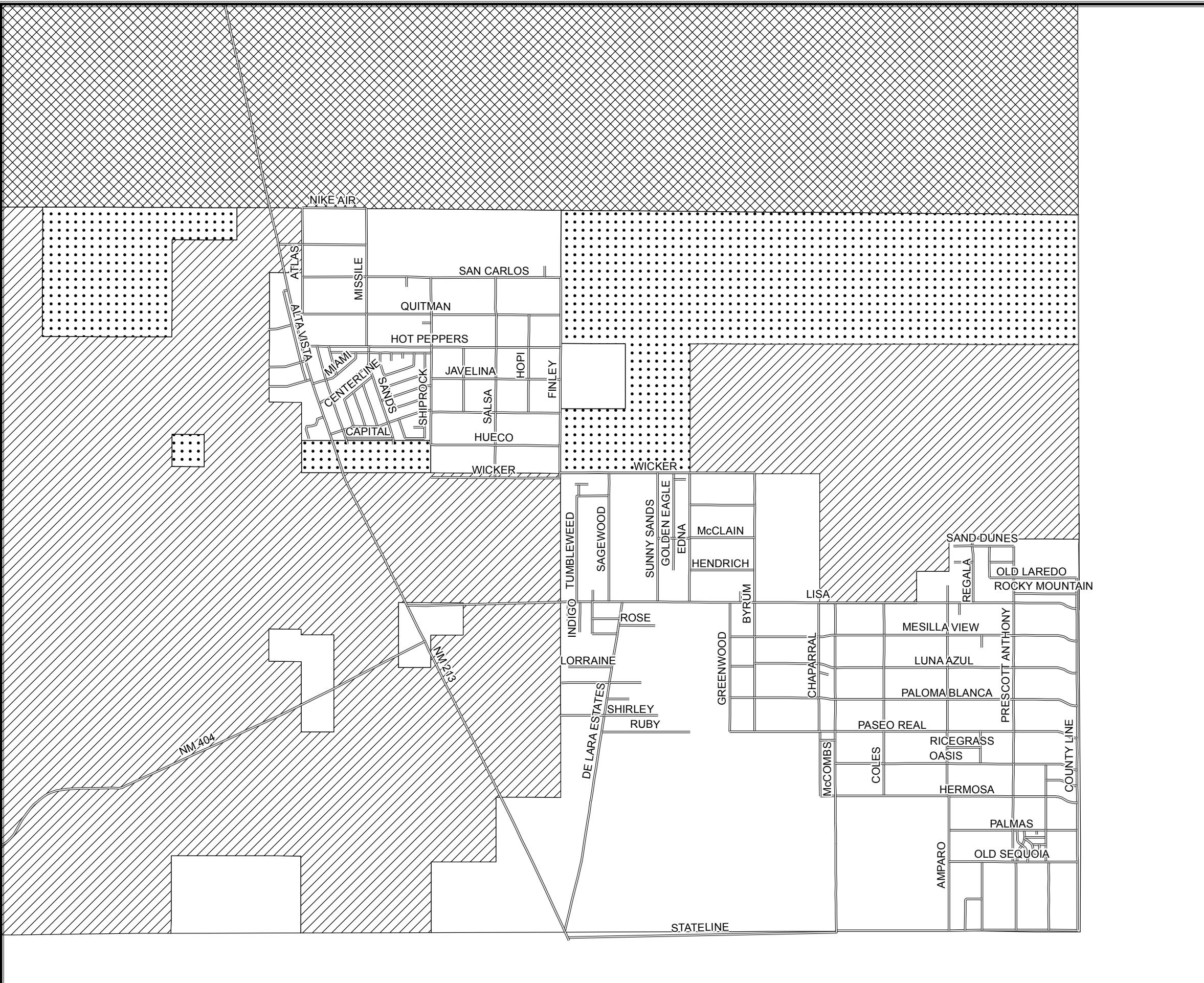
1 inch equals 2,000 feet

URS



LAND OWNERSHIP

Exhibit 2A



0 2,000 4,000 8,000 FT

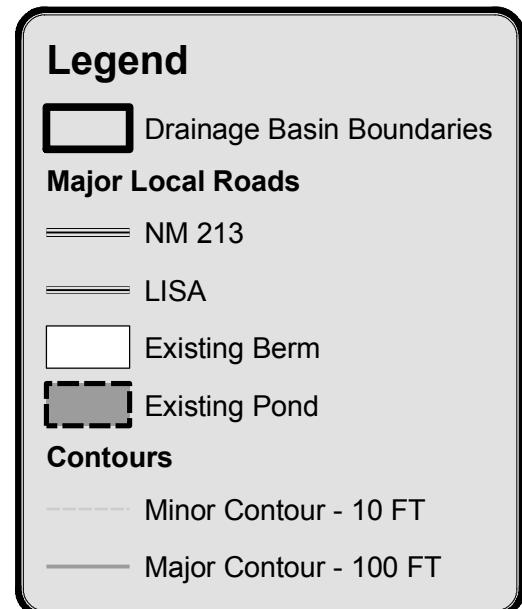
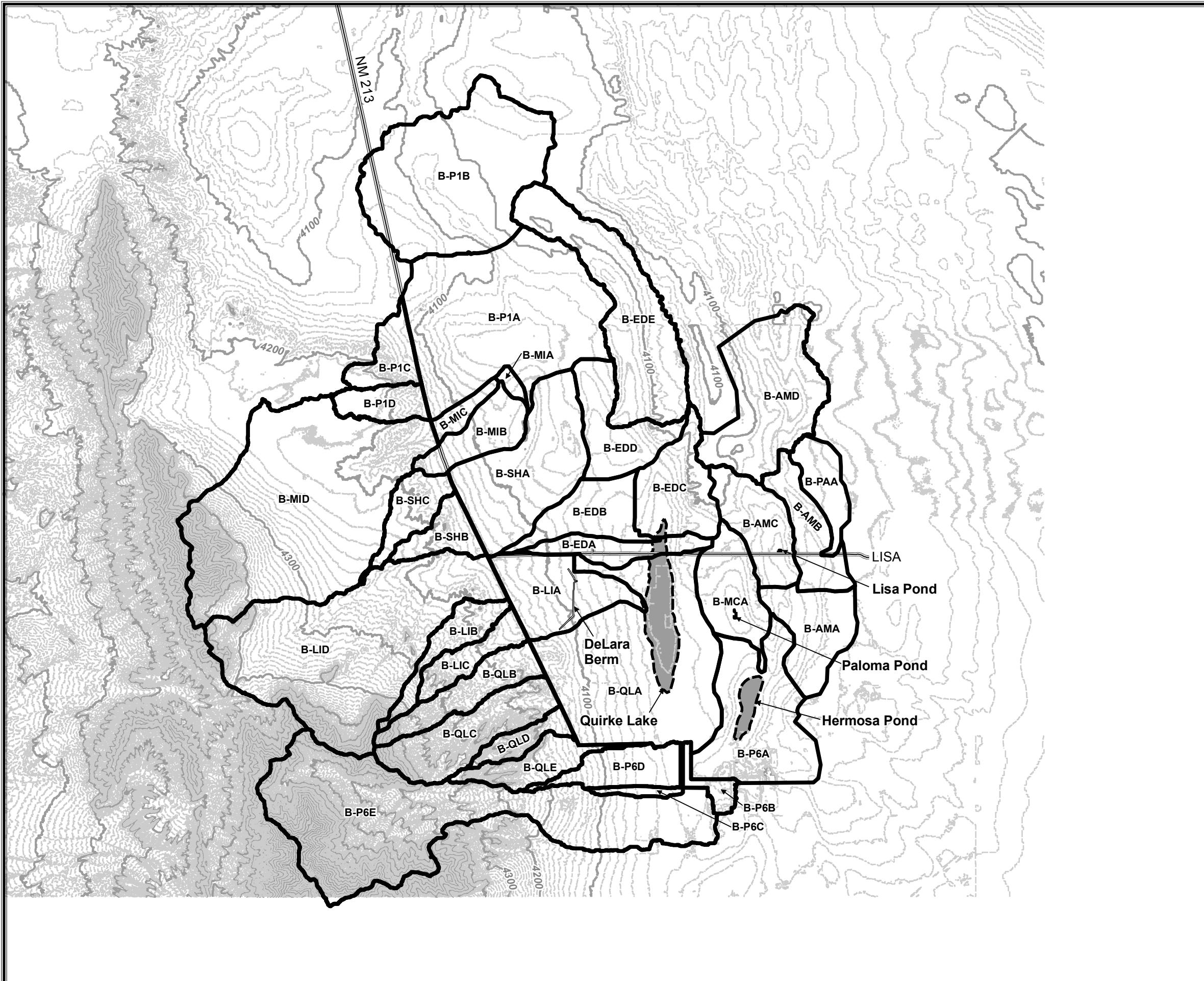
1 inch equals 4,000 feet

URS



DRAINAGE BASINS

Exhibit 8A



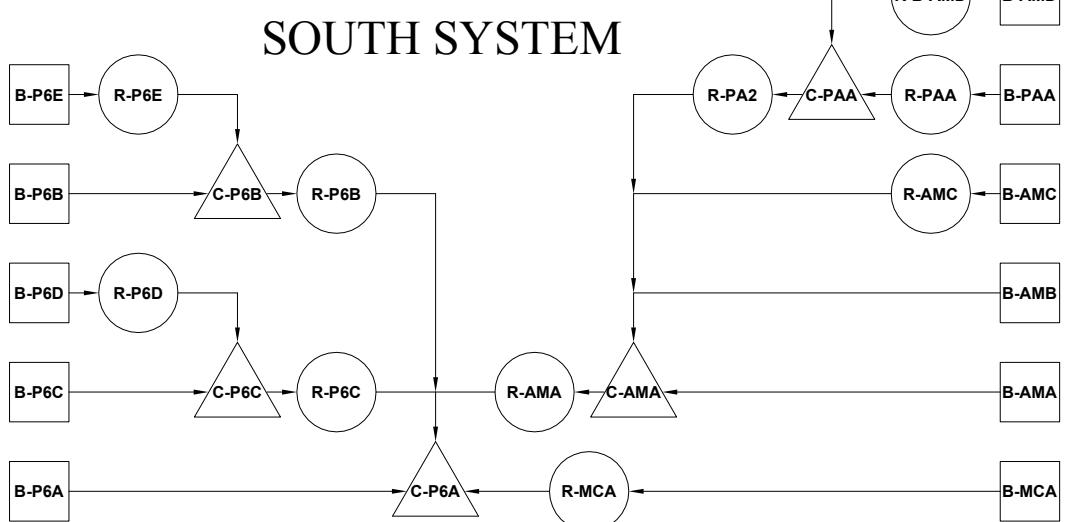
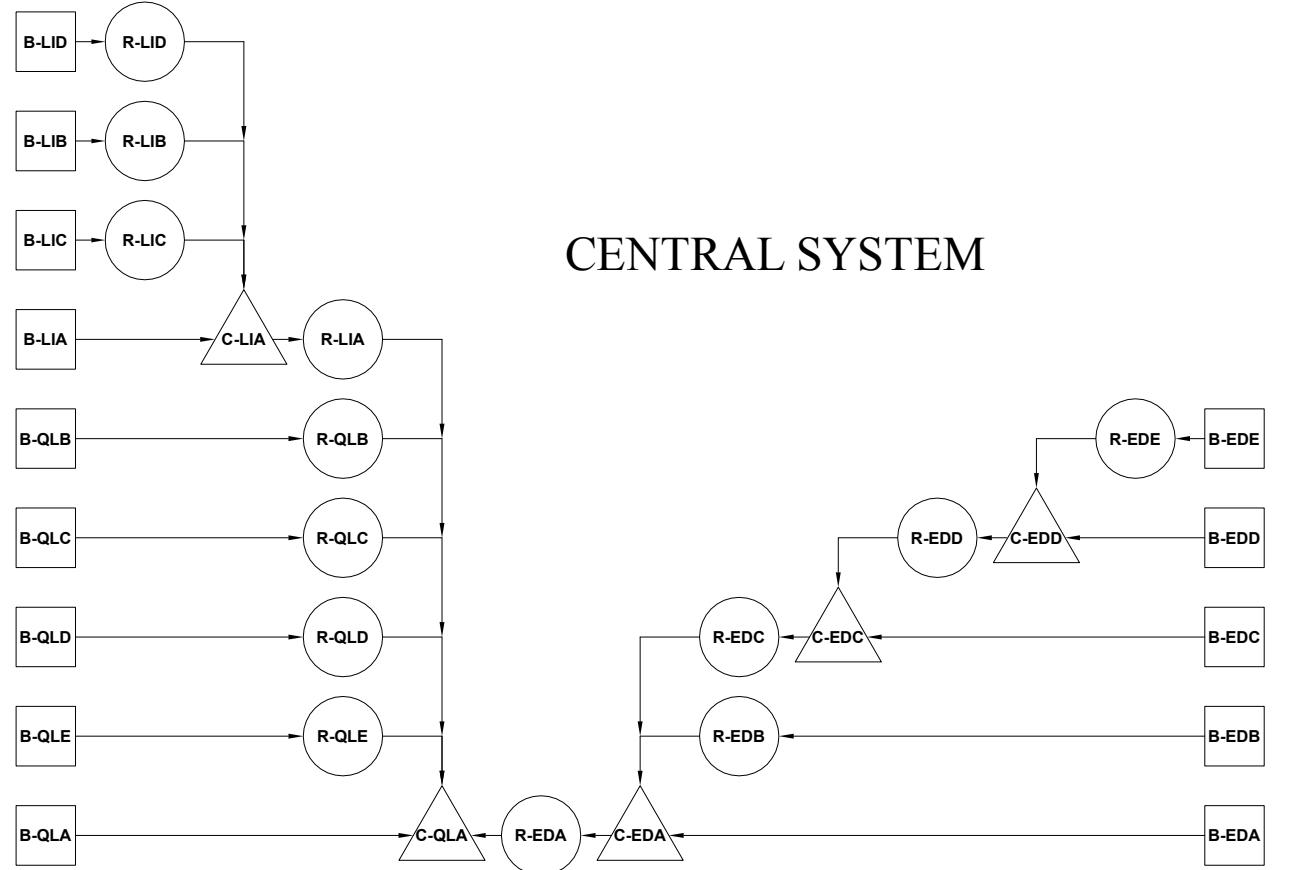
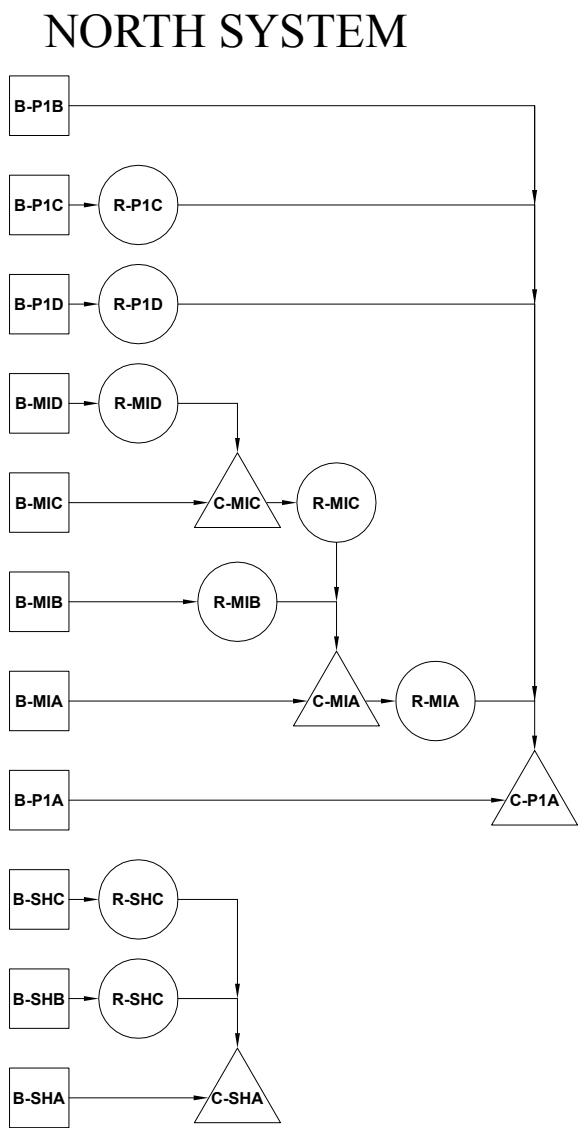
0 3,500 7,000 14,000 FT
1 inch equals 7,000 feet

URS



DRAINAGE SYSTEM SCHEMATIC

Exhibit 9



Proposed System	Hydrologic Element	Area (acre)	Peak Discharge (cfs)
Amparo	B-AMA	761.6	391.4
	B-AMB	601.6	239.4
	B-AMC	716.8	350.5
	B-AMD	1414.4	418.4
Edna	B-EDA	403.2	225.3
	B-EDB	633.6	303.8
	B-EDC	825.6	479.3
	B-EDD	761.6	308.9
	B-EDE	1785.6	349.5
	B-LIA	902.4	422.0
Lisa	B-LIB	422.4	714.8
	B-LIC	384.0	477.6
	B-LID	3552.0	2798.5
	B-MCA	723.2	331.6
McCombs	B-MIA	64.0	87.9
	B-MIB	531.2	312.9
	B-MIC	160.0	122.1
	B-MID	4224.0	3790.1
Miami	B-SHA	1548.8	959.1
	B-SHB	358.4	366.5
	B-SHC	422.4	280.2
	B-XXX		
Playa 1	B-P1A	3059.2	1489.9
	B-P1B	2739.2	804.6
	B-P1C	390.4	405.3
	B-P1D	339.2	289.7
	B-XXX		
	B-XXX		
Playa 6	B-P6A	1536.0	740.9
	B-P6B	160.0	434.6
	B-P6C	102.4	109.8
	B-P6D	524.8	472.2
	B-P6E	3852.8	3136.9
	B-XXX		
Prescott Anthony	B-PAA	409.6	160.0
	B-QLA	3008.0	1198.7
	B-QLB	608.0	963.5
	B-QLC	960.0	2137.4
	B-QLD	256.0	538.0
	B-QLE	467.2	570.1
Quirke Lake	B-XXX		
	B-XXX		
Shiprock	B-SHA	1548.8	959.1
	B-SHB	358.4	366.5
	B-SHC	422.4	280.2
B-XXX	B-XXX		
	B-XXX		
	B-XXX		
	B-XXX		

Legend

- C-XXX Combine Hydrograph
- R-XXX Route Hydrograph
- B-XXX Basin Hydrograph

URS

Hydrologic Computations

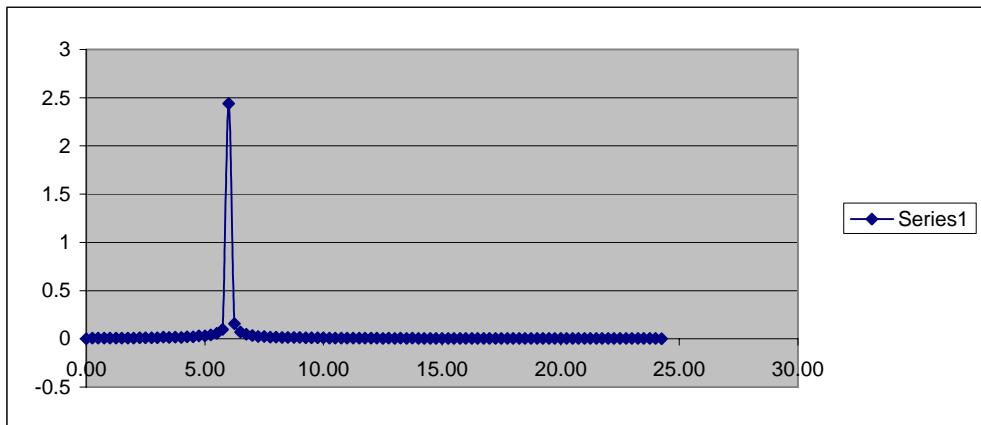
HEC-HMS Input Data

Chaparral Drainage Master Plan
SCS Type IIa Storm

Time	Time	ordinates (TYPE II -75)	3.69	in
Time	Time	Ordinates (TYPE II -75)	Ord * rain	incremental rainfall (in)
0:00	0.00	0	0	0
0:15	0.25	0.002	0.00738	0.00738
0:30	0.50	0.004	0.01476	0.00738
0:45	0.75	0.006	0.02214	0.00738
1:00	1.00	0.008	0.02952	0.00738
1:15	1.25	0.0104	0.038376	0.008856
1:30	1.50	0.0129	0.047601	0.009225
1:45	1.75	0.0153	0.056457	0.008856
2:00	2.00	0.0177	0.065313	0.008856
2:15	2.25	0.0208	0.076752	0.011439
2:30	2.50	0.0239	0.088191	0.011439
2:45	2.75	0.027	0.09963	0.011439
3:00	3.00	0.0301	0.111069	0.011439
3:15	3.25	0.0345	0.127305	0.016236
3:30	3.50	0.0388	0.143172	0.015867
3:45	3.75	0.0432	0.159408	0.016236
4:00	4.00	0.0475	0.175275	0.015867
4:15	4.25	0.0533	0.196677	0.021402
4:30	4.50	0.0591	0.218079	0.021402
4:45	4.75	0.0673	0.248337	0.030258
5:00	5.00	0.0754	0.278226	0.029889
5:15	5.25	0.0863	0.318447	0.040221
5:30	5.50	0.1016	0.374904	0.056457
5:45	5.75	0.128	0.47232	0.097416
6:00	6.00	0.7895	2.913255	2.440935
6:15	6.25	0.8323	3.071187	0.157932
6:30	6.50	0.8516	3.142404	0.071217
6:45	6.75	0.8644	3.189636	0.047232
7:00	7.00	0.874	3.22506	0.035424
7:15	7.25	0.8808	3.250152	0.025092
7:30	7.50	0.8875	3.274875	0.024723
7:45	7.75	0.8926	3.293694	0.018819
8:00	8.00	0.8977	3.312513	0.018819
8:15	8.25	0.9013	3.325797	0.013284
8:30	8.50	0.905	3.33945	0.013653
8:45	8.75	0.9086	3.352734	0.013284
9:00	9.00	0.9122	3.366018	0.013284
9:15	9.25	0.9149	3.375981	0.009963
9:30	9.50	0.9176	3.385944	0.009963
9:45	9.75	0.9203	3.395907	0.009963
10:00	10.00	0.923	3.40587	0.009963
10:15	10.25	0.9252	3.413988	0.008118
10:30	10.50	0.9274	3.422106	0.008118
10:45	10.75	0.9296	3.430224	0.008118
11:00	11.00	0.9318	3.438342	0.008118
11:15	11.25	0.9337	3.445353	0.007011
11:30	11.50	0.9355	3.451995	0.006642
11:45	11.75	0.9374	3.459006	0.007011
12:00	12.00	0.9392	3.465648	0.006642
12:15	12.25	0.9409	3.471921	0.006273
12:30	12.50	0.9425	3.477825	0.005904
12:45	12.75	0.9442	3.484098	0.006273
13:00	13.00	0.9458	3.490002	0.005904
13:15	13.25	0.9475	3.496275	0.006273
13:30	13.50	0.9491	3.502179	0.005904
13:45	13.75	0.9508	3.508452	0.006273
14:00	14.00	0.9524	3.514356	0.005904
14:15	14.25	0.9539	3.519891	0.005535

Chaparral Drainage Master Plan
SCS Type IIa Storm

Time	Time	Ordinates (TYPE II -75)	Ord * rain	incremental rainfall (in)
14:30	14.50	0.9553	3.525057	0.005166
14:45	14.75	0.9568	3.530592	0.005535
15:00	15.00	0.9582	3.535758	0.005166
15:15	15.25	0.9596	3.540924	0.005166
15:30	15.50	0.9611	3.546459	0.005535
15:45	15.75	0.9625	3.551625	0.005166
16:00	16.00	0.964	3.55716	0.005535
16:15	16.25	0.9653	3.561957	0.004797
16:30	16.50	0.9666	3.566754	0.004797
16:45	16.75	0.9679	3.571551	0.004797
17:00	17.00	0.9692	3.576348	0.004797
17:15	17.25	0.9704	3.580776	0.004428
17:30	17.50	0.9717	3.585573	0.004797
17:45	17.75	0.973	3.59037	0.004797
18:00	18.00	0.9743	3.595167	0.004797
18:15	18.25	0.9755	3.599595	0.004428
18:30	18.50	0.9766	3.603654	0.004059
18:45	18.75	0.9778	3.608082	0.004428
19:00	19.00	0.979	3.61251	0.004428
19:15	19.25	0.9801	3.616569	0.004059
19:30	19.50	0.9813	3.620997	0.004428
19:45	19.75	0.9824	3.625056	0.004059
20:00	20.00	0.9836	3.629484	0.004428
20:15	20.25	0.9847	3.633543	0.004059
20:30	20.50	0.9858	3.637602	0.004059
20:45	20.75	0.9868	3.641292	0.00369
21:00	21.00	0.9879	3.645351	0.004059
21:15	21.25	0.989	3.64941	0.004059
21:30	21.50	0.9901	3.653469	0.004059
21:45	21.75	0.9911	3.657159	0.00369
22:00	22.00	0.9922	3.661218	0.004059
22:15	22.25	0.9932	3.664908	0.00369
22:30	22.50	0.9942	3.668598	0.00369
22:45	22.75	0.9951	3.671919	0.003321
23:00	23.00	0.9961	3.675609	0.00369
23:15	23.25	0.9971	3.679299	0.00369
23:30	23.50	0.9981	3.682989	0.00369
23:45	23.75	0.999	3.68631	0.003321
0:00	24.00	1	3.69	0.00369
0:15	24.25	1	3.69	0
0:30	24.50	1	3.69	0
0:45	24.75	1	3.69	0



Chaparral Drainage Master Plan
Curve Number Summary

System	Basin	Area (mi²)	CN (III)
Playa 1	B-P1A	4.78	83.1
	B-P1B	4.28	83.0
	B-P1C	0.61	79.7
	B-P1D	0.53	82.4
Miami	B-MIA	0.10	82.5
	B-MIB	0.83	82.2
	B-MIC	0.25	82.3
	B-MID	6.60	89.5
Shiprock	B-SHA	2.42	82.9
	B-SHB	0.56	83.6
	B-SHC	0.66	83.5
Lisa	B-LIA	1.41	83.5
	B-LIB	0.66	88.0
	B-LIC	0.60	86.7
	B-LID	5.55	91.0
Quirke Lake	B-QLA	4.70	83.4
	B-QLB	0.95	87.6
	B-QLC	1.50	91.6
	B-QLD	0.40	90.0
	B-QUE	0.73	89.1
Edna	B-EDA	0.63	83.2
	B-EDB	0.99	82.9
	B-EDC	1.29	82.8
	B-EDD	1.19	83.0
	B-EDE	2.79	83.0
McCombs	B-MCA	1.13	83.0
Amparo	B-AMA	1.19	82.7
	B-AMB	0.94	82.9
	B-AMC	1.12	82.9
	B-AMD	2.45	83.8
Prescott Anthony	B-PAA	0.64	83.0
Playa 6	B-P6A	2.40	84.1
	B-P6B	0.25	89.6
	B-P6C	0.16	87.9
	B-P6D	0.82	85.0
	B-P6E	6.02	90.5

Chaparral Drainage Master Plan
Curve Number Computation

Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-QLD	118805.5537	2.7274	0.004261	B	52	Desert Shrub	68	0.289748
B-QLD	6405.694455	0.147054	0.000229	B	71	Grassland	61	0.013969
B-QLD	51173.32766	1.174777	0.001835	B	21	Low Intensity Resid*	65	0.119275
B-QLD	30116.23831	0.691373	0.00108	B	71	Grassland	61	0.06588
B-QLD	31756.62109	0.729031	0.001139	B	31	Bare Rock/Sand/Clay	86	0.097954
B-QLD	218289.6138	5.011239	0.00783	B	71	Grassland	61	0.47763
B-QLD	471755.7101	10.83002	0.016921	B	52	Desert Shrub	68	1.150628
B-QLD	7249.600638	0.166427	0.00026	B	71	Grassland	61	0.01586
B-QLD	201699.047	4.630372	0.007234	B	52	Desert Shrub	68	0.491912
B-QLD	5562.717764	0.127702	0.000199	B	21	Low Intensity Resid*	65	0.012935
B-QLD	304838.0037	6.998117	0.010934	B	21	Low Intensity Resid*	65	0.71071
B-QLD	51458.44036	1.181323	0.001845	B	71	Grassland	61	0.112545
B-QLD	9685.627814	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLD	6631.667115	0.152242	0.000237	B	71	Grassland	61	0.014457
B-QLD	6631.664768	0.152242	0.000237	B	71	Grassland	61	0.014457
B-QLD	29905.79049	0.686542	0.001072	B	71	Grassland	61	0.065392
B-QLD	7185.21552	0.164949	0.000257	B	82	Row Crops	86	0.022102
B-QLD	22367.35857	0.513483	0.000802	B	52	Desert Shrub	68	0.054536
B-QLD	6239.245084	0.143233	0.000223	B	71	Grassland	61	0.013603
B-QLD	23881.6549	0.548247	0.000856	B	71	Grassland	61	0.052216
B-QLD	1288640.435	29.583113	0.046223	B	52	Desert Shrub	68	3.143164
B-QLD	61983.93416	1.422955	0.002223	D	21	Low Intensity Resid*	82	0.182286
B-QLD	27274.17476	0.626128	0.000978	D	52	Desert Shrub	84	0.082152
B-QLD	4286.024605	0.098393	0.000153	D	21	Low Intensity Resid*	82	0.012546
B-QLD	6631.671255	0.152242	0.000237	D	71	Grassland	80	0.01896
B-QLD	26984.52308	0.619479	0.000967	D	71	Grassland	80	0.07736
B-QLD	13072.82295	0.30011	0.000468	D	21	Low Intensity Resid*	82	0.038376
B-QLD	87170.69967	2.001163	0.003126	D	21	Low Intensity Resid*	82	0.256332
B-QLD	7793.820719	0.178921	0.000279	D	21	Low Intensity Resid*	82	0.022878
B-QLD	8154594.55	187.203731	0.292505	D	52	Desert Shrub	84	24.57042
	Sum =		0.404957		Sum =			32.22145
	CN(II) =		79.57		CN(III) =			89.96

B-P1A	389533.8593	8.942466	0.013972	B	52	Desert Shrub	68	0.950096
B-P1A	482565.6259	11.078182	0.017309	B	52	Desert Shrub	68	1.177012
B-P1A	73385.9505	1.684709	0.002632	B	82	Row Crops	86	0.226352
B-P1A	9685.639663	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P1A	13514.02134	0.310239	0.000484	B	52	Desert Shrub	68	0.032912
B-P1A	52275.96641	1.200091	0.001875	B	21	Low Intensity Resid*	65	0.121875
B-P1A	5.812779	0.000133	2.09E-07	B	21	Low Intensity Resid*	65	1.35528E-05
B-P1A	29618.27653	0.679942	0.001062	B	52	Desert Shrub	68	0.072216
B-P1A	28845.5356	0.662202	0.001034	B	52	Desert Shrub	68	0.070312
B-P1A	38991.02393	0.89511	0.001398	B	21	Low Intensity Resid*	65	0.09087
B-P1A	491703.2365	11.287953	0.017637	B	52	Desert Shrub	68	1.199316
B-P1A	39.787294	0.000913	0.000001	B	52	Desert Shrub	68	0.000068
B-P1A	4909.252297	0.1127	0.000176	B	52	Desert Shrub	68	0.011968
B-P1A	5605.588552	0.128686	0.000201	B	21	Low Intensity Resid*	65	0.013065
B-P1A	4450.397129	0.102167	0.000159	B	21	Low Intensity Resid*	65	0.010335
B-P1A	353012.0799	8.104042	0.012662	B	52	Desert Shrub	68	0.861016
B-P1A	33451.00264	0.767929	0.001199	B	21	Low Intensity Resid*	65	0.077935
B-P1A	73781.48056	1.693789	0.002646	B	52	Desert Shrub	68	0.179928
B-P1A	283538.1715	6.50914	0.01017	B	21	Low Intensity Resid*	65	0.66105
B-P1A	57728.69916	1.325268	0.00207	B	52	Desert Shrub	68	0.14076
B-P1A	376111.0182	8.63432	0.013491	B	71	Grassland	61	0.822951
B-P1A	194245.4723	4.459262	0.006967	B	71	Grassland	61	0.424987
B-P1A	125146.8957	2.872977	0.004489	B	71	Grassland	61	0.273829
B-P1A	106379.5614	2.442138	0.003815	B	71	Grassland	61	0.232715
B-P1A	52764.96464	1.211316	0.001892	B	21	Low Intensity Resid*	65	0.12298
B-P1A	17426.71365	0.400062	0.000625	B	52	Desert Shrub	68	0.0425
B-P1A	3271.01717	0.075092	0.000117	B	82	Row Crops	86	0.010062

Chaparral Drainage Master Plan
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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-P1A	29056.93778	0.667055	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-P1A	38742.58207	0.889407	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-P1A	131756.3827	3.02471	0.004726	B	21 Low Intensity Resid*	65	0.30719
B-P1A	29056.93532	0.667055	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-P1A	121721.0695	2.794331	0.004366	B	71 Grassland	61	0.266326
B-P1A	38742.5788	0.889407	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-P1A	9685.63243	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P1A	16453.34661	0.377716	0.00059	B	52 Desert Shrub	68	0.04012
B-P1A	173642.439	3.986281	0.006228	B	52 Desert Shrub	68	0.423504
B-P1A	77484.97708	1.77881	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-P1A	25858.85646	0.593637	0.000927	B	52 Desert Shrub	68	0.063036
B-P1A	110379.0457	2.533954	0.003959	B	52 Desert Shrub	68	0.269212
B-P1A	29905.79217	0.686542	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-P1A	81169.62025	1.863398	0.002911	B	21 Low Intensity Resid*	65	0.189215
B-P1A	185347.2189	4.254986	0.006648	B	52 Desert Shrub	68	0.452064
B-P1A	14258.55468	0.327331	0.000511	B	21 Low Intensity Resid*	65	0.033215
B-P1A	621037.752	14.257065	0.022276	B	52 Desert Shrub	68	1.514768
B-P1A	15.662863	0.000359	5.62E-07	B	21 Low Intensity Resid*	65	3.65188E-05
B-P1A	57860.47916	1.328293	0.002075	B	71 Grassland	61	0.126575
B-P1A	9685.629757	0.222351	0.000347	B	52 Desert Shrub	68	0.023596
B-P1A	49275.87769	1.131218	0.001767	B	21 Low Intensity Resid*	65	0.114855
B-P1A	9685.63	0.222351	0.000347	B	52 Desert Shrub	68	0.023596
B-P1A	9685.629727	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P1A	428.465497	0.009836	0.000015	B	21 Low Intensity Resid*	65	0.000975
B-P1A	93530.41124	2.147162	0.003354	B	21 Low Intensity Resid*	65	0.21801
B-P1A	222123.811	5.099261	0.007967	B	52 Desert Shrub	68	0.541756
B-P1A	19371.26223	0.444702	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P1A	9685.63025	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P1A	664478.7138	15.254332	0.023834	B	52 Desert Shrub	68	1.620712
B-P1A	87170.65349	2.001162	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-P1A	25727.45336	0.590621	0.000922	B	21 Low Intensity Resid*	65	0.05993
B-P1A	568980.3156	13.06199	0.020409	B	52 Desert Shrub	68	1.387812
B-P1A	447320.9514	10.269076	0.016045	B	52 Desert Shrub	68	1.09106
B-P1A	429009.6316	9.848705	0.015388	B	52 Desert Shrub	68	1.046384
B-P1A	1159270.497	26.613188	0.041583	B	52 Desert Shrub	68	2.827644
B-P1A	3067769.557	70.426298	0.110041	B	52 Desert Shrub	68	7.482788
B-P1A	9679.816116	0.222218	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P1A	25919.0081	0.595018	0.000929	B	52 Desert Shrub	68	0.063172
B-P1A	4924.696014	0.113055	0.000176	B	52 Desert Shrub	68	0.011968
B-P1A	717933.9323	16.481495	0.025752	B	21 Low Intensity Resid*	65	1.67388
B-P1A	66410.03557	1.524564	0.002382	B	52 Desert Shrub	68	0.161976
B-P1A	65739.09753	1.509162	0.002358	B	21 Low Intensity Resid*	65	0.15327
B-P1A	1328586.844	30.500157	0.047656	B	52 Desert Shrub	68	3.240608
B-P1A	522126.5261	11.986375	0.018728	B	52 Desert Shrub	68	1.273504
B-P1A	229650.3807	5.272047	0.008237	B	52 Desert Shrub	68	0.560116
B-P1A	443145.5349	10.173221	0.015895	B	21 Low Intensity Resid*	65	1.033175
B-P1A	11833.54153	0.27166	0.000424	B	21 Low Intensity Resid*	65	0.02756
B-P1A	197993.0873	4.545295	0.007102	B	52 Desert Shrub	68	0.482936
B-P1A	2999978.622	68.870032	0.107609	B	21 Low Intensity Resid*	65	6.994585
B-P1A	74658055.21	1713.913113	2.677989	B	52 Desert Shrub	68	182.103252
B-P1A	94979.54049	2.18043	0.003406	B	52 Desert Shrub	68	0.231608
B-P1A	159769.6488	3.667806	0.00573	B	52 Desert Shrub	68	0.38964
B-P1A	29056.97402	0.667056	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-P1A	29056.9711	0.667056	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-P1A	360814.0858	8.283151	0.012942	B	52 Desert Shrub	68	0.880056
B-P1A	169806.0169	3.898209	0.00609	B	21 Low Intensity Resid*	65	0.39585
B-P1A	546449.4402	12.544752	0.019601	B	52 Desert Shrub	68	1.332868
B-P1A	67799.59396	1.556464	0.002431	B	21 Low Intensity Resid*	65	0.158015
B-P1A	9685.655046	0.222352	0.000347	B	52 Desert Shrub	68	0.023596
B-P1A	16189.65834	0.371663	0.00058	B	21 Low Intensity Resid*	65	0.0377
B-P1A	1127996.878	25.895245	0.040461	B	52 Desert Shrub	68	2.751348
B-P1A	366309.4973	8.409308	0.013139	B	52 Desert Shrub	68	0.893452
B-P1A	191147.7998	4.388149	0.006856	B	21 Low Intensity Resid*	65	0.44564

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P1A	67596.19336	1.551795	0.002424	B	23	Commercial	92	0.223008
B-P1A	193713.1226	4.447041	0.006948	B	21	Low Intensity Resid*	65	0.45162
B-P1A	48428.26239	1.111759	0.001737	B	21	Low Intensity Resid*	65	0.112905
B-P1A	1387613.824	31.85523	0.049773	B	52	Desert Shrub	68	3.384564
B-P1A	73137.38142	1.679003	0.002623	B	21	Low Intensity Resid*	65	0.170495
B-P1A	1219694.514	28.000333	0.04375	B	52	Desert Shrub	68	2.975
B-P1A	1126572.389	25.862543	0.04041	B	52	Desert Shrub	68	2.74788
B-P1A	77485.16389	1.778814	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-P1A	425756.5015	9.774024	0.015271	B	52	Desert Shrub	68	1.038428
B-P1A	1.578124	0.000036	5.66E-08	B	52	Desert Shrub	68	3.84931E-06
B-P1A	174341.719	4.002335	0.006253	B	21	Low Intensity Resid*	65	0.406445
B-P1A	172828.2842	3.967591	0.006199	B	21	Low Intensity Resid*	65	0.402935
B-P1A	115271.2404	2.646263	0.004134	B	21	Low Intensity Resid*	65	0.26871
B-P1A	1123535.818	25.792833	0.040301	B	52	Desert Shrub	68	2.740468
B-P1A	1404419.154	32.241027	0.050376	B	52	Desert Shrub	68	3.425568
B-P1A	77485.16528	1.778814	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-P1A	1426930.15	32.757808	0.051184	B	52	Desert Shrub	68	3.480512
B-P1A	164656.0666	3.779983	0.005906	B	21	Low Intensity Resid*	65	0.38389
B-P1A	35062.01594	0.804913	0.001257	B	82	Row Crops	86	0.108102
B-P1A	404407.9753	9.283929	0.014506	B	52	Desert Shrub	68	0.986408
B-P1A	171201.3336	3.930241	0.006141	B	21	Low Intensity Resid*	65	0.399165
B-P1A	92619.77992	2.126257	0.003322	B	21	Low Intensity Resid*	65	0.21593
B-P1A	18896.48764	0.433803	0.000677	B	22	High Intensity Resi*	70	0.04739
B-P1A	629573.9976	14.45303	0.022582	B	21	Low Intensity Resid*	65	1.46783
B-P1A	1518578.501	34.861765	0.054471	B	52	Desert Shrub	68	3.704028
B-P1A	1037608.446	23.820212	0.037219	B	52	Desert Shrub	68	2.530892
B-P1A	1399639.703	32.131306	0.050205	B	52	Desert Shrub	68	3.41394
B-P1A	596647.058	13.697131	0.021401	B	52	Desert Shrub	68	1.455268
B-P1A	211299.9175	4.850778	0.007579	B	52	Desert Shrub	68	0.515372
B-P1A	19325.1523	0.443644	0.000693	B	52	Desert Shrub	68	0.047124
B-P1A	64134.29249	1.47232	0.0023	B	21	Low Intensity Resid*	65	0.1495
B-P1A	2436.558362	0.055935	0.000087	B	52	Desert Shrub	68	0.005916
B-P1A	318339.5557	7.30807	0.011418	B	52	Desert Shrub	68	0.776424
B-P1A	3283914.734	75.388308	0.117794	B	21	Low Intensity Resid*	65	7.65661
B-P1A	1156805.414	26.556598	0.041494	B	52	Desert Shrub	68	2.821592
B-P1A	39302.5591	0.902262	0.001409	B	21	Low Intensity Resid*	65	0.091585
B-P1A	11550.24777	0.265157	0.000414	B	52	Desert Shrub	68	0.028152
B-P1A	31907.5788	0.732497	0.001144	B	21	Low Intensity Resid*	65	0.07436
B-P1A	190337.7863	4.369554	0.006827	B	21	Low Intensity Resid*	65	0.443755
B-P1A	1054360.46	24.204785	0.037819	B	52	Desert Shrub	68	2.571692
B-P1A	46624.09244	1.070341	0.001672	B	82	Row Crops	86	0.143792
B-P1A	60484.62421	1.388535	0.002169	B	52	Desert Shrub	68	0.147492
B-P1A	75390.12415	1.730719	0.002704	B	52	Desert Shrub	68	0.183872
B-P1A	770841.1733	17.696078	0.02765	B	52	Desert Shrub	68	1.8802
B-P1A	51807.27709	1.189331	0.001858	B	52	Desert Shrub	68	0.126344
B-P1A	96856.36353	2.223516	0.003474	B	52	Desert Shrub	68	0.236232
B-P1A	785989.2221	18.043829	0.028193	B	52	Desert Shrub	68	1.917124
B-P1A	35061.95756	0.804911	0.001257	B	82	Row Crops	86	0.108102
B-P1A	684321.4436	15.709858	0.024546	B	52	Desert Shrub	68	1.669128
B-P1A	150120.2174	3.446285	0.005384	B	82	Row Crops	86	0.463024
B-P1A	6631.679052	0.152242	0.000237	B	82	Row Crops	86	0.020382
B-P1A	77485.13014	1.778813	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-P1A	77485.14742	1.778814	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-P1A	504569.624	11.583324	0.018098	B	82	Row Crops	86	1.556428
B-P1A	232757.0636	5.343366	0.008349	B	52	Desert Shrub	68	0.567732
B-P1A	200172.8516	4.595336	0.00718	B	52	Desert Shrub	68	0.48824
B-P1A	107444.034	2.466575	0.003854	B	52	Desert Shrub	68	0.262072
B-P1A	43855.24425	1.006777	0.001573	B	21	Low Intensity Resid*	65	0.102245
B-P1A	594435.3686	13.646358	0.021322	B	82	Row Crops	86	1.833692
B-P1A	198042.625	4.546433	0.007103	B	52	Desert Shrub	68	0.483004
B-P1A	9685.631951	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P1A	77469.37427	1.778452	0.002778	B	21	Low Intensity Resid*	65	0.18057

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P1A	26.288167	0.000603	9.43E-07	B	71	Grassland	61	5.75205E-05
B-P1A	224744.2204	5.159417	0.008061	B	82	Row Crops	86	0.693246
B-P1A	19371.28572	0.444703	0.000694	B	52	Desert Shrub	68	0.047192
B-P1A	13944.39474	0.320119	0.0005	B	82	Row Crops	86	0.043
B-P1A	1253285.956	28.771486	0.044955	B	82	Row Crops	86	3.86613
B-P1A	43221.23824	0.992223	0.00155	B	82	Row Crops	86	0.1333
B-P1A	89197.55607	2.047694	0.003199	B	82	Row Crops	86	0.275114
B-P1A	246524.0475	5.659413	0.008842	B	21	Low Intensity Resid*	65	0.57473
B-P1A	86742.25466	1.991328	0.003111	B	21	Low Intensity Resid*	65	0.202215
B-P1A	222163.7699	5.100178	0.007969	B	52	Desert Shrub	68	0.541892
B-P1A	46617.24465	1.070184	0.001672	B	21	Low Intensity Resid*	65	0.10868
B-P1A	196758.1378	4.516945	0.007057	B	52	Desert Shrub	68	0.479876
B-P1A	855268.4784	19.634262	0.030678	B	52	Desert Shrub	68	2.086104
B-P1A	959391.9103	22.024607	0.034413	B	52	Desert Shrub	68	2.340084
B-P1A	719660.5552	16.521133	0.025814	B	52	Desert Shrub	68	1.755352
B-P1A	1862581.481	42.758987	0.06681	B	52	Desert Shrub	68	4.54308
B-P1A	55222.60938	1.267736	0.00198	B	21	Low Intensity Resid*	65	0.1287
B-P1A	12550.5047	0.288119	0.00045	B	21	Low Intensity Resid*	65	0.02925
B-P1A	1335614.878	30.661498	0.047908	B	21	Low Intensity Resid*	65	3.11402
B-P1A	2020672.738	46.388263	0.072481	B	52	Desert Shrub	68	4.928708
Sum =		4.77554877			Sum =		325.0641664	
CN(II) =			68.07		CN(III) =		83.06	
B-MIC	48980.31446	1.124433	0.001756	B	21	Low Intensity Resid*	65	0.11414
B-MIC	312553.2966	7.175236	0.011211	B	52	Desert Shrub	68	0.762348
B-MIC	1791.635256	0.04113	0.000064	B	71	Grassland	61	0.003904
B-MIC	112065.858	2.572678	0.004019	B	52	Desert Shrub	68	0.273292
B-MIC	27504.3823	0.631413	0.000986	B	21	Low Intensity Resid*	65	0.06409
B-MIC	112825.8534	2.590125	0.004047	B	52	Desert Shrub	68	0.275196
B-MIC	52664.87051	1.209019	0.001889	B	21	Low Intensity Resid*	65	0.122785
B-MIC	15530.81238	0.356538	0.000557	B	22	High Intensity Resi*	70	0.03899
B-MIC	77485.148	1.778814	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-MIC	85945.30421	1.973032	0.003082	B	52	Desert Shrub	68	0.209576
B-MIC	819285.6914	18.808211	0.029387	B	52	Desert Shrub	68	1.998316
B-MIC	17575.27737	0.403472	0.00063	B	21	Low Intensity Resid*	65	0.04095
B-MIC	584999.3943	13.429738	0.020983	B	52	Desert Shrub	68	1.426844
B-MIC	333055.2143	7.645895	0.011946	B	52	Desert Shrub	68	0.812328
B-MIC	197643	4.537258	0.007089	B	52	Desert Shrub	68	0.482052
B-MIC	87.211048	0.002002	0.000003	B	52	Desert Shrub	68	0.000204
B-MIC	95976.72038	2.203322	0.003442	B	52	Desert Shrub	68	0.234056
B-MIC	49745.47366	1.141998	0.001784	B	52	Desert Shrub	68	0.121312
B-MIC	711409.1372	16.331706	0.025518	B	21	Low Intensity Resid*	65	1.65867
B-MIC	9685.64928	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-MIC	19371.29645	0.444703	0.000694	B	52	Desert Shrub	68	0.047192
B-MIC	9685.647777	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-MIC	48428.25718	1.111759	0.001737	B	21	Low Intensity Resid*	65	0.112905
B-MIC	319324.4654	7.330681	0.011454	B	52	Desert Shrub	68	0.778872
B-MIC	19371.30061	0.444703	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-MIC	19371.2994	0.444703	0.000694	B	52	Desert Shrub	68	0.047192
B-MIC	38742.59585	0.889407	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-MIC	9685.648644	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-MIC	19371.30055	0.444703	0.000694	B	52	Desert Shrub	68	0.047192
B-MIC	6631.680936	0.152242	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-MIC	20174.29675	0.463138	0.000723	B	52	Desert Shrub	68	0.049164
B-MIC	19412.3624	0.445646	0.000696	B	52	Desert Shrub	68	0.047328
B-MIC	38742.6003	0.889407	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-MIC	9685.650694	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-MIC	29056.94973	0.667055	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-MIC	29056.94982	0.667055	0.001042	B	52	Desert Shrub	68	0.070856
B-MIC	307531.3119	7.059947	0.011031	B	52	Desert Shrub	68	0.750108
B-MIC	19371.30224	0.444703	0.000694	B	52	Desert Shrub	68	0.047192

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B-MIC	9685.649148	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-MIC	69138.16021	1.587193	0.002479 B		21	Low Intensity Resid*	65	0.161135
B-MIC	19371.30339	0.444703	0.000694 B		52	Desert Shrub	68	0.047192
B-MIC	6202.505908	0.142389	0.000222 B		52	Desert Shrub	68	0.015096
B-MIC	19371.30332	0.444703	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-MIC	73739.63142	1.692829	0.002645 B		21	Low Intensity Resid*	65	0.171925
B-MIC	34324.23091	0.787975	0.001231 B		21	Low Intensity Resid*	65	0.080015
B-MIC	9685.650259	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-MIC	19371.30136	0.444703	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-MIC	288909.60555	6.632451	0.010363 B		52	Desert Shrub	68	0.704684
B-MIC	200212.2592	4.596241	0.007181 B		52	Desert Shrub	68	0.488308
B-MIC	6631.683568	0.152242	0.000237 B		52	Desert Shrub	68	0.016116
B-MIC	224481.8948	5.153395	0.008052 B		21	Low Intensity Resid*	65	0.52338
B-MIC	208860.4704	4.794776	0.007491 B		52	Desert Shrub	68	0.509388
B-MIC	961.987389	0.022084	0.000034 B		21	Low Intensity Resid*	65	0.00221
B-MIC	72700.10852	1.668964	0.002607 B		21	Low Intensity Resid*	65	0.169455
B-MIC	20.591311	0.000472	7.39E-07 B		21	Low Intensity Resid*	65	4.80098E-05
B-MIC	92800.66902	2.13041	0.003328 B		52	Desert Shrub	68	0.226304
B-MIC	78057.65019	1.791957	0.002799 B		52	Desert Shrub	68	0.190332
B-MIC	1458.184234	0.033475	0.000052 B		52	Desert Shrub	68	0.003536
B-MIC	25029.58991	0.5746	0.000897 B		52	Desert Shrub	68	0.060996
B-MIC	156144.6524	3.584587	0.0056 B		52	Desert Shrub	68	0.3808
B-MIC	770908.4467	17.697622	0.027652 B		21	Low Intensity Resid*	65	1.79738
B-MIC	327.634609	0.007521	0.000011 B		52	Desert Shrub	68	0.000748
Sum =		0.252427739			Sum =		16.90422501	
CN(II) =		66.97			CN(III) =		82.34	

B-MIB	1000.430516	0.022966	0.000035 B		21	Low Intensity Resid*	65	0.002275
B-MIB	40813.79605	0.936955	0.001463 B		52	Desert Shrub	68	0.099484
B-MIB	347.35885	0.007974	0.000012 B		52	Desert Shrub	68	0.000816
B-MIB	71636.44529	1.644546	0.002569 B		71	Grassland	61	0.156709
B-MIB	8707.305558	0.199892	0.000312 B		21	Low Intensity Resid*	65	0.02028
B-MIB	17009.10361	0.390475	0.00061 B		21	Low Intensity Resid*	65	0.03965
B-MIB	655969.4578	15.058986	0.023529 B		52	Desert Shrub	68	1.599972
B-MIB	699318.858	16.054151	0.025084 B		52	Desert Shrub	68	1.705712
B-MIB	145939.2285	3.350303	0.005234 B		52	Desert Shrub	68	0.355912
B-MIB	212494.794	4.878209	0.007622 B		52	Desert Shrub	68	0.518296
B-MIB	96279.40381	2.21027	0.003453 B		21	Low Intensity Resid*	65	0.224445
B-MIB	154970.1701	3.557625	0.005558 B		21	Low Intensity Resid*	65	0.36127
B-MIB	17510.1264	0.401977	0.000628 B		21	Low Intensity Resid*	65	0.04082
B-MIB	31825.63192	0.730615	0.001141 B		52	Desert Shrub	68	0.077588
B-MIB	12637.19553	0.29011	0.000453 B		21	Low Intensity Resid*	65	0.029445
B-MIB	10944.88312	0.251258	0.000392 B		21	Low Intensity Resid*	65	0.02548
B-MIB	441768.7948	10.141616	0.015846 B		52	Desert Shrub	68	1.077528
B-MIB	38123.0003	0.875183	0.001367 B		21	Low Intensity Resid*	65	0.088855
B-MIB	26641.10968	0.611595	0.000955 B		21	Low Intensity Resid*	65	0.062075
B-MIB	1888.880085	0.043362	0.000067 B		21	Low Intensity Resid*	65	0.004355
B-MIB	259313.0665	5.953008	0.009301 B		52	Desert Shrub	68	0.632468
B-MIB	745032.6068	17.103595	0.026724 B		52	Desert Shrub	68	1.817232
B-MIB	366654.5195	8.417229	0.013151 B		52	Desert Shrub	68	0.894268
B-MIB	283048.0568	6.497889	0.010152 B		52	Desert Shrub	68	0.690336
B-MIB	166001.8728	3.810878	0.005954 B		52	Desert Shrub	68	0.404872
B-MIB	52420.76968	1.203415	0.00188 B		52	Desert Shrub	68	0.12784
B-MIB	243702.4374	5.594638	0.008741 B		52	Desert Shrub	68	0.594388
B-MIB	62774.53751	1.441105	0.002251 B		52	Desert Shrub	68	0.153068
B-MIB	120623.2802	2.769129	0.004326 B		52	Desert Shrub	68	0.294168
B-MIB	149745.8697	3.437692	0.005371 B		52	Desert Shrub	68	0.365228
B-MIB	62612.64614	1.437388	0.002245 B		52	Desert Shrub	68	0.15266
B-MIB	1402.542654	0.032197	0.00005 B		52	Desert Shrub	68	0.0034
B-MIB	846897.4616	19.44209	0.030378 B		52	Desert Shrub	68	2.065704
B-MIB	200479.6608	4.602379	0.007191 B		52	Desert Shrub	68	0.488988

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-MIB	38742.56659	0.889406	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-MIB	77484.97997	1.77881	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-MIB	19371.28149	0.444703	0.000694	B	82 Row Crops	86	0.059684
B-MIB	44837.4627	1.029326	0.001608	B	52 Desert Shrub	68	0.109344
B-MIB	58113.83698	1.33411	0.002084	B	71 Grassland	61	0.127124
B-MIB	548559.1142	12.593184	0.019676	B	52 Desert Shrub	68	1.337968
B-MIB	65307.12754	1.499245	0.002342	B	82 Row Crops	86	0.201412
B-MIB	90722.33819	2.082698	0.003254	B	21 Low Intensity Resid*	65	0.21151
B-MIB	1333.581072	0.030614	0.000047	B	21 Low Intensity Resid*	65	0.003055
B-MIB	37176.21637	0.853448	0.001333	B	21 Low Intensity Resid*	65	0.086645
B-MIB	351776.0057	8.075665	0.012618	B	52 Desert Shrub	68	0.858024
B-MIB	397217.1007	9.118849	0.014248	B	52 Desert Shrub	68	0.968864
B-MIB	3562.459657	0.081782	0.000127	B	52 Desert Shrub	68	0.008636
B-MIB	78968.66114	1.812871	0.002832	B	52 Desert Shrub	68	0.192576
B-MIB	2684580.169	61.62948	0.096296	B	21 Low Intensity Resid*	65	6.25924
B-MIB	4432.169873	0.101748	0.000158	B	52 Desert Shrub	68	0.010744
B-MIB	81643.45254	1.874275	0.002928	B	21 Low Intensity Resid*	65	0.19032
B-MIB	250528.3115	5.751338	0.008986	B	52 Desert Shrub	68	0.611048
B-MIB	94821.86823	2.17681	0.003401	B	52 Desert Shrub	68	0.231268
B-MIB	6631.677456	0.152242	0.000237	B	21 Low Intensity Resid*	65	0.015405
B-MIB	592.431226	0.0136	0.000021	B	21 Low Intensity Resid*	65	0.001365
B-MIB	137637.1717	3.159714	0.004937	B	21 Low Intensity Resid*	65	0.320905
B-MIB	17940.83251	0.411864	0.000643	B	21 Low Intensity Resid*	65	0.041795
B-MIB	574098.8322	13.179495	0.020592	B	52 Desert Shrub	68	1.400256
B-MIB	48428.21635	1.111758	0.001737	B	21 Low Intensity Resid*	65	0.112905
B-MIB	2415.815368	0.055459	0.000086	B	21 Low Intensity Resid*	65	0.005559
B-MIB	36853.6906	0.846044	0.001321	B	21 Low Intensity Resid*	65	0.085865
B-MIB	417882.4911	9.593261	0.014989	B	52 Desert Shrub	68	1.019252
B-MIB	38742.57525	0.889407	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-MIB	29182.31722	0.669933	0.001046	B	21 Low Intensity Resid*	65	0.06799
B-MIB	46538.87345	1.068385	0.001669	B	21 Low Intensity Resid*	65	0.108485
B-MIB	13225.46556	0.303614	0.000474	B	21 Low Intensity Resid*	65	0.03081
B-MIB	260116.0771	5.971443	0.00933	B	52 Desert Shrub	68	0.63444
B-MIB	38742.57122	0.889407	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-MIB	356294.4495	8.179395	0.01278	B	52 Desert Shrub	68	0.86904
B-MIB	58559.92103	1.34435	0.0021	B	21 Low Intensity Resid*	65	0.1365
B-MIB	66778.22465	1.533017	0.002395	B	21 Low Intensity Resid*	65	0.155675
B-MIB	213573.8238	4.90298	0.00766	B	52 Desert Shrub	68	0.52088
B-MIB	38722.01468	0.888935	0.001388	B	21 Low Intensity Resid*	65	0.09022
B-MIB	236105.5536	5.420237	0.008469	B	52 Desert Shrub	68	0.575892
B-MIB	363976.3442	8.355747	0.013055	B	52 Desert Shrub	68	0.88774
B-MIB	80655.13642	1.851587	0.002893	B	52 Desert Shrub	68	0.196724
B-MIB	27654.38485	0.634857	0.000991	B	52 Desert Shrub	68	0.067388
B-MIB	350567.6124	8.047924	0.012574	B	52 Desert Shrub	68	0.855032
B-MIB	86617.38039	1.988461	0.003106	B	52 Desert Shrub	68	0.211208
B-MIB	337242.8933	7.742031	0.012096	B	52 Desert Shrub	68	0.822528
B-MIB	105874.2532	2.430538	0.003797	B	52 Desert Shrub	68	0.258196
B-MIB	48428.24694	1.111759	0.001737	B	52 Desert Shrub	68	0.118116
B-MIB	68198.99444	1.565633	0.002446	B	52 Desert Shrub	68	0.166328
B-MIB	94119.12206	2.160677	0.003376	B	52 Desert Shrub	68	0.229568
B-MIB	54384.86551	1.248504	0.00195	B	52 Desert Shrub	68	0.1326
B-MIB	15396.63699	0.353458	0.000552	B	21 Low Intensity Resid*	65	0.035588
B-MIB	6631.681839	0.152242	0.000237	B	52 Desert Shrub	68	0.016116
B-MIB	127568.847	2.928577	0.004575	B	52 Desert Shrub	68	0.3111
B-MIB	19992.05072	0.458954	0.000717	B	52 Desert Shrub	68	0.048756
B-MIB	19412.34072	0.445646	0.000696	B	52 Desert Shrub	68	0.047328
B-MIB	84645.42653	1.943191	0.003036	B	52 Desert Shrub	68	0.206448
B-MIB	26129.29428	0.599846	0.000937	B	21 Low Intensity Resid*	65	0.060905
B-MIB	166627.6475	3.825244	0.005976	B	21 Low Intensity Resid*	65	0.38844
B-MIB	13514.04276	0.310239	0.000484	B	21 Low Intensity Resid*	65	0.03146
B-MIB	14895.01323	0.341942	0.000534	B	21 Low Intensity Resid*	65	0.03471
B-MIB	20784.9513	0.477156	0.000745	B	21 Low Intensity Resid*	65	0.048425
B-MIB	77485.20365	1.778815	0.002779	B	21 Low Intensity Resid*	65	0.180635

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-MIB	87170.82664	2.001166	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-MIB	976382.9531	22.414668	0.035022	B	52	Desert Shrub	68	2.381496
B-MIB	9996.479047	0.229487	0.000358	B	52	Desert Shrub	68	0.024344
B-MIB	13225.47586	0.303615	0.000474	B	21	Low Intensity Resid*	65	0.03081
B-MIB	3009.622735	0.069091	0.000107	B	21	Low Intensity Resid*	65	0.006955
B-MIB	679765.1493	15.60526	0.024383	B	52	Desert Shrub	68	1.658044
B-MIB	2538388.766	58.273387	0.091052	B	21	Low Intensity Resid*	65	5.91838
B-MIB	2364995.107	54.292816	0.084832	B	52	Desert Shrub	68	5.768576
B-MIB	426313.3563	9.786807	0.015291	A	52	Desert Shrub	49	0.749259
		Sum =	0.829431			Sum =		55.384494
		CN(II) =	66.77			CN(III) =		82.21
B-MIA	56362.00983	1.293893	0.002021	B	52	Desert Shrub	68	0.137428
B-MIA	29905.82543	0.686543	0.001072	B	21	Low Intensity Resid*	65	0.06968
B-MIA	349946.3612	8.033663	0.012552	B	52	Desert Shrub	68	0.853536
B-MIA	120354.5821	2.762961	0.004317	B	52	Desert Shrub	68	0.293556
B-MIA	568444.0718	13.04968	0.02039	B	52	Desert Shrub	68	1.38652
B-MIA	225953.9009	5.187187	0.008104	B	21	Low Intensity Resid*	65	0.52676
B-MIA	438348.2256	10.06309	0.015723	B	52	Desert Shrub	68	1.069164
B-MIA	406299.2937	9.327348	0.014573	B	52	Desert Shrub	68	0.990964
B-MIA	3246.402915	0.074527	0.000116	B	21	Low Intensity Resid*	65	0.00754
B-MIA	1137.187565	0.026106	0.00004	B	52	Desert Shrub	68	0.00272
B-MIA	347152.6767	7.969528	0.012452	B	21	Low Intensity Resid*	65	0.80938
B-MIA	47164.1363	1.082739	0.001691	B	52	Desert Shrub	68	0.114988
B-MIA	11286.06332	0.259092	0.000404	B	21	Low Intensity Resid*	65	0.02626
B-MIA	75716.03461	1.7382	0.002715	B	52	Desert Shrub	68	0.18462
B-MIA	59564.71813	1.367417	0.002136	B	21	Low Intensity Resid*	65	0.13884
B-MIA	35492.36631	0.814792	0.001273	B	52	Desert Shrub	68	0.086564
		Sum =	0.099579			Sum =		6.69852
		CN(II) =	67.27			CN(III) =		82.54
B-SHC	4414818.079	101.350277	0.158359	B	52	Desert Shrub	68	10.768412
B-SHC	6056872.593	139.046661	0.21726	A	52	Desert Shrub	49	10.64574
B-SHC	7960009.013	182.736662	0.285526	D	52	Desert Shrub	84	23.984184
B-SHC	77806.68216	1.786195	0.00279	D	52	Desert Shrub	84	0.23436
B-SHC	116.04126	0.002663	0.000004	B	52	Desert Shrub	68	0.000272
		Sum =	0.663939			Sum =		45.632968
		CN(II) =	68.73			CN(III) =		83.49
B-SHA	2576.48016	0.059147	0.000092	B	52	Desert Shrub	68	0.006256
B-SHA	7753.034341	0.177985	0.000278	B	21	Low Intensity Resid*	65	0.01807
B-SHA	432713.6837	9.933739	0.015521	B	52	Desert Shrub	68	1.055428
B-SHA	53174.42905	1.220716	0.001907	B	52	Desert Shrub	68	0.129676
B-SHA	469010.5623	10.767	0.016823	B	21	Low Intensity Resid*	65	1.093495
B-SHA	87978.20399	2.019701	0.003155	B	21	Low Intensity Resid*	65	0.205075
B-SHA	259807.3286	5.964355	0.009319	B	52	Desert Shrub	68	0.633692
B-SHA	1553753.926	35.669282	0.055733	B	52	Desert Shrub	68	3.789844
B-SHA	565265.3889	12.976707	0.020276	B	52	Desert Shrub	68	1.378768
B-SHA	744981.7802	17.102428	0.026722	B	52	Desert Shrub	68	1.817096
B-SHA	15809.70075	0.36294	0.000567	B	21	Low Intensity Resid*	65	0.036855
B-SHA	6631.663912	0.152242	0.000237	B	52	Desert Shrub	68	0.016116
B-SHA	154970.0541	3.557622	0.005558	B	21	Low Intensity Resid*	65	0.36127
B-SHA	57681.14601	1.324176	0.002069	B	52	Desert Shrub	68	0.140692
B-SHA	6734.072356	0.154593	0.000241	B	21	Low Intensity Resid*	65	0.015665
B-SHA	349521.3377	8.023905	0.012537	B	21	Low Intensity Resid*	65	0.814905
B-SHA	9685.63049	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-SHA	9685.630185	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-SHA	99287.87547	2.279335	0.003561	B	52 Desert Shrub	68	0.242148
B-SHA	9685.629884	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-SHA	29056.87682	0.667054	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-SHA	29905.79924	0.686542	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-SHA	601803.703	13.815512	0.021586	B	52 Desert Shrub	68	1.467848
B-SHA	483536.4879	11.10047	0.017344	B	52 Desert Shrub	68	1.179392
B-SHA	581137.5846	13.341083	0.020845	B	52 Desert Shrub	68	1.41746
B-SHA	203140.568	4.663465	0.007286	B	52 Desert Shrub	68	0.495448
B-SHA	6631.667995	0.152242	0.000237	B	52 Desert Shrub	68	0.016116
B-SHA	691110.2856	15.865709	0.02479	B	52 Desert Shrub	68	1.68572
B-SHA	114227.4463	2.622301	0.004097	B	52 Desert Shrub	68	0.278596
B-SHA	151398.5453	3.475632	0.00543	B	52 Desert Shrub	68	0.36924
B-SHA	297242.5079	6.823749	0.010662	B	21 Low Intensity Resid*	65	0.69303
B-SHA	9685.62641	0.222351	0.000347	B	71 Grassland	61	0.021167
B-SHA	41832.07133	0.960332	0.0015	B	21 Low Intensity Resid*	65	0.0975
B-SHA	532436.9796	12.223071	0.019098	B	52 Desert Shrub	68	1.298664
B-SHA	29056.87578	0.667054	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-SHA	61894.36269	1.420899	0.00222	B	52 Desert Shrub	68	0.15096
B-SHA	70939.82885	1.628554	0.002544	B	71 Grassland	61	0.155184
B-SHA	67799.42418	1.55646	0.002431	B	21 Low Intensity Resid*	65	0.158015
B-SHA	325687.8594	7.476764	0.011682	B	21 Low Intensity Resid*	65	0.75933
B-SHA	29411.55723	0.675196	0.001054	B	21 Low Intensity Resid*	65	0.06851
B-SHA	884914.6846	20.314845	0.031741	B	52 Desert Shrub	68	2.158388
B-SHA	1435323.5	32.950493	0.051485	B	52 Desert Shrub	68	3.50098
B-SHA	665978.5913	15.288764	0.023888	B	52 Desert Shrub	68	1.624384
B-SHA	175677.3407	4.032996	0.006301	B	82 Row Crops	86	0.541886
B-SHA	311216.1255	7.144539	0.011163	B	52 Desert Shrub	68	0.759084
B-SHA	81481.92579	1.870567	0.002922	B	21 Low Intensity Resid*	65	0.18993
B-SHA	207088.2691	4.754092	0.007428	B	21 Low Intensity Resid*	65	0.48282
B-SHA	69914.47761	1.605015	0.002507	B	82 Row Crops	86	0.215602
B-SHA	354608.9942	8.140702	0.012719	B	52 Desert Shrub	68	0.864892
B-SHA	161550.1205	3.70868	0.005794	B	52 Desert Shrub	68	0.393992
B-SHA	56821.87509	1.30445	0.002038	B	21 Low Intensity Resid*	65	0.13247
B-SHA	6631.665511	0.152242	0.000237	B	82 Row Crops	86	0.020382
B-SHA	31593.17635	0.725279	0.001133	B	21 Low Intensity Resid*	65	0.073645
B-SHA	176880.7576	4.060623	0.006344	B	52 Desert Shrub	68	0.431392
B-SHA	69338.24781	1.591787	0.002487	B	21 Low Intensity Resid*	65	0.161655
B-SHA	74204.57635	1.703502	0.002661	B	21 Low Intensity Resid*	65	0.172965
B-SHA	726004.5591	16.666771	0.026041	B	52 Desert Shrub	68	1.770788
B-SHA	29056.87027	0.667053	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-SHA	1230946.837	28.25865	0.044154	B	52 Desert Shrub	68	3.002472
B-SHA	131631.9652	3.021854	0.004721	B	82 Row Crops	86	0.406006
B-SHA	77485.0448	1.778811	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-SHA	29056.86923	0.667053	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-SHA	77485.0235	1.778811	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-SHA	2793786.169	64.136505	0.100213	B	52 Desert Shrub	68	6.814484
B-SHA	435891.3403	10.006688	0.015635	B	82 Row Crops	86	1.34461
B-SHA	9685.639461	0.222351	0.000347	B	82 Row Crops	86	0.029842
B-SHA	9685.639429	0.222351	0.000347	B	52 Desert Shrub	68	0.023596
B-SHA	31888.80238	0.732066	0.001143	B	21 Low Intensity Resid*	65	0.074295
B-SHA	29905.77857	0.686542	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-SHA	133733.0074	3.070087	0.004797	B	82 Row Crops	86	0.412542
B-SHA	9685.622152	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-SHA	19371.2787	0.444703	0.000694	B	52 Desert Shrub	68	0.047192
B-SHA	3208.007216	0.073645	0.000115	B	21 Low Intensity Resid*	65	0.007475
B-SHA	66793.92563	1.533377	0.002395	B	82 Row Crops	86	0.20597
B-SHA	249617.6427	5.730432	0.008953	B	21 Low Intensity Resid*	65	0.581945
B-SHA	40517.58077	0.930155	0.001453	B	71 Grassland	61	0.088633
B-SHA	519252.5258	11.920397	0.018625	B	52 Desert Shrub	68	1.2665
B-SHA	304480.743	6.989916	0.010921	B	52 Desert Shrub	68	0.742628
B-SHA	1898899.204	43.592727	0.068113	B	52 Desert Shrub	68	4.631684
B-SHA	650746.3642	14.93908	0.023342	B	52 Desert Shrub	68	1.587256
B-SHA	1155245.288	26.520782	0.041438	B	52 Desert Shrub	68	2.817784

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-SHA	2893104.853	66.416548	0.103775 B	21 Low Intensity Resid*	65	6.745375	
B-SHA	798007.6497	18.319734	0.028624 B	52 Desert Shrub	68	1.946432	
B-SHA	459.90885	0.010558	0.000016 B	21 Low Intensity Resid*	65	0.00104	
B-SHA	48477.21334	1.112883	0.001738 B	52 Desert Shrub	68	0.118184	
B-SHA	450350.1423	10.338616	0.016154 B	52 Desert Shrub	68	1.098472	
B-SHA	122134.6209	2.803825	0.00438 B	21 Low Intensity Resid*	65	0.2847	
B-SHA	77266.2293	1.773788	0.002771 B	52 Desert Shrub	68	0.188428	
B-SHA	10217.72784	0.234566	0.000366 B	52 Desert Shrub	68	0.024888	
B-SHA	805.523685	0.018492	0.000028 B	52 Desert Shrub	68	0.001904	
B-SHA	222812.7996	5.115078	0.007992 B	21 Low Intensity Resid*	65	0.51948	
B-SHA	622650.2162	14.294082	0.022334 B	52 Desert Shrub	68	1.518712	
B-SHA	4476.274556	0.102761	0.00016 B	21 Low Intensity Resid*	65	0.0104	
B-SHA	16624.03747	0.381635	0.000596 B	21 Low Intensity Resid*	65	0.03874	
B-SHA	44183.95113	1.014323	0.001584 B	52 Desert Shrub	68	0.107712	
B-SHA	19371.28415	0.444703	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-SHA	64714.84128	1.485648	0.002321 B	52 Desert Shrub	68	0.157828	
B-SHA	109834.2441	2.521447	0.003939 B	21 Low Intensity Resid*	65	0.256035	
B-SHA	26007.01148	0.597038	0.000932 B	21 Low Intensity Resid*	65	0.06058	
B-SHA	3280.510054	0.07531	0.000117 B	21 Low Intensity Resid*	65	0.007605	
B-SHA	13225.46684	0.303614	0.000474 B	21 Low Intensity Resid*	65	0.03081	
B-SHA	23305.53552	0.535021	0.000835 B	52 Desert Shrub	68	0.05678	
B-SHA	269858.2124	6.195092	0.009679 B	52 Desert Shrub	68	0.658172	
B-SHA	21784.93491	0.500113	0.000781 B	52 Desert Shrub	68	0.053108	
B-SHA	209777.8638	4.815837	0.007524 B	21 Low Intensity Resid*	65	0.48906	
B-SHA	18098.78781	0.41549	0.000649 B	82 Row Crops	86	0.055814	
B-SHA	188545.3248	4.328405	0.006763 B	21 Low Intensity Resid*	65	0.439595	
B-SHA	3778194.797	86.735417	0.135524 B	52 Desert Shrub	68	9.215632	
B-SHA	810919.1798	18.616142	0.029087 B	52 Desert Shrub	68	1.977916	
B-SHA	1387337.241	31.84888	0.049763 B	52 Desert Shrub	68	3.383884	
B-SHA	892347.7623	20.485485	0.032008 B	52 Desert Shrub	68	2.176544	
B-SHA	101239.4621	2.324138	0.003631 B	71 Grassland	61	0.221491	
B-SHA	25693005.2	589.830238	0.921609 B	52 Desert Shrub	68	62.669412	
B-SHA	2591.607656	0.059495	0.000092 B	52 Desert Shrub	68	0.006256	
B-SHA	3281854.391	75.341009	0.11772 B	21 Low Intensity Resid*	65	7.6518	
B-SHA	631563.4047	14.4987	0.022654 B	52 Desert Shrub	68	1.540472	
Sum =		2.422616		Sum =		164.267541	
CN(II) =		67.81		CN(III) =		82.89	

B-EDD	22932.79221	0.526464	0.000822 B	21 Low Intensity Resid*	65	0.05343
B-EDD	77484.97321	1.77881	0.002779 B	21 Low Intensity Resid*	65	0.180635
B-EDD	135755.944	3.116527	0.004869 B	52 Desert Shrub	68	0.331092
B-EDD	382938.3144	8.791054	0.013736 B	21 Low Intensity Resid*	65	0.89284
B-EDD	35652.9112	0.818478	0.001278 B	21 Low Intensity Resid*	65	0.08307
B-EDD	702621.5093	16.12997	0.025203 B	52 Desert Shrub	68	1.713804
B-EDD	1274799.435	29.265368	0.045727 B	52 Desert Shrub	68	3.109436
B-EDD	164655.5545	3.779971	0.005906 B	21 Low Intensity Resid*	65	0.38389
B-EDD	57443.64097	1.318724	0.00206 B	21 Low Intensity Resid*	65	0.1339
B-EDD	494.223089	0.011345	0.000017 B	21 Low Intensity Resid*	65	0.001105
B-EDD	56650.52012	1.300516	0.002032 B	82 Row Crops	86	0.174752
B-EDD	29905.77845	0.686542	0.001072 B	21 Low Intensity Resid*	65	0.06968
B-EDD	77484.96938	1.77881	0.002779 B	21 Low Intensity Resid*	65	0.180635
B-EDD	38612.59693	0.886423	0.001385 B	21 Low Intensity Resid*	65	0.090025
B-EDD	41343.36162	0.949112	0.001482 B	52 Desert Shrub	68	0.100776
B-EDD	565607.9028	12.98457	0.020288 B	52 Desert Shrub	68	1.379584
B-EDD	77484.94256	1.778809	0.002779 B	21 Low Intensity Resid*	65	0.180635
B-EDD	1329527.258	30.521746	0.04769 B	52 Desert Shrub	68	3.24292
B-EDD	29056.84223	0.667053	0.001042 B	21 Low Intensity Resid*	65	0.06773
B-EDD	140586.2652	3.227416	0.005042 B	21 Low Intensity Resid*	65	0.32773
B-EDD	128046.8134	2.93955	0.004593 B	21 Low Intensity Resid*	65	0.298545
B-EDD	123933.8816	2.84513	0.004445 B	82 Row Crops	86	0.38227
B-EDD	19371.2423	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-EDD	38742.45444	0.889404	0.001389 B	21 Low Intensity Resid*	65	0.090285	
B-EDD	19371.24167	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	161162.6479	3.699785	0.00578 B	82 Row Crops	86	0.49708	
B-EDD	19371.24105	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	9685.620224	0.222351	0.000347 B	21 Low Intensity Resid*	65	0.022555	
B-EDD	19371.23985	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	65335.338	1.499892	0.002343 B	21 Low Intensity Resid*	65	0.152295	
B-EDD	19371.23923	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	19371.23861	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	38742.46118	0.889404	0.001389 B	21 Low Intensity Resid*	65	0.090285	
B-EDD	16163.23649	0.371056	0.000579 B	21 Low Intensity Resid*	65	0.037635	
B-EDD	19371.23798	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	29056.84635	0.667053	0.001042 B	21 Low Intensity Resid*	65	0.06773	
B-EDD	19371.23736	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	19371.23674	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511	
B-EDD	58113.72887	1.334107	0.002084 B	21 Low Intensity Resid*	65	0.13546	
B-EDD	9685.621121	0.222351	0.000347 B	21 Low Intensity Resid*	65	0.022555	
B-EDD	48428.07796	1.111755	0.001737 B	21 Low Intensity Resid*	65	0.112905	
B-EDD	9685.620835	0.222351	0.000347 B	21 Low Intensity Resid*	65	0.022555	
B-EDD	29898.67744	0.686379	0.001072 B	21 Low Intensity Resid*	65	0.06968	
B-EDD	59199.08224	1.359023	0.002123 B	21 Low Intensity Resid*	65	0.137995	
B-EDD	41700.75863	0.957317	0.001495 B	21 Low Intensity Resid*	65	0.097175	
B-EDD	1951761.577	44.80628	0.070009 B	52 Desert Shrub	68	4.760612	
B-EDD	28264.70205	0.648868	0.001013 B	21 Low Intensity Resid*	65	0.065845	
B-EDD	12458.61819	0.28601	0.000446 B	21 Low Intensity Resid*	65	0.02899	
B-EDD	473207.5909	10.863351	0.016973 B	52 Desert Shrub	68	1.154164	
B-EDD	9235.295352	0.212013	0.000331 B	21 Low Intensity Resid*	65	0.021515	
B-EDD	9912922.573	227.569388	0.355577 B	52 Desert Shrub	68	24.179236	
B-EDD	1415.773747	0.032501	0.00005 B	52 Desert Shrub	68	0.0034	
B-EDD	1241.37597	0.028498	0.000044 B	21 Low Intensity Resid*	65	0.00286	
B-EDD	28778.57588	0.660665	0.001032 B	21 Low Intensity Resid*	65	0.06708	
B-EDD	129.861229	0.002981	0.000004 B	21 Low Intensity Resid*	65	0.00026	
B-EDD	155866.5049	3.578202	0.00559 B	21 Low Intensity Resid*	65	0.36335	
B-EDD	14254037.95	327.227684	0.511293 B	52 Desert Shrub	68	34.767924	
B-EDD	2686.192236	0.061666	0.000096 B	52 Desert Shrub	68	0.006528	
Sum =		1.187804		Sum =		80.762428	
CN(II) =		67.99		CN(III) =		83.01	

B-EDB	6727.337432	0.154438	0.000241 B	21 Low Intensity Resid*	65	0.015665
B-EDB	513.338425	0.011784	0.000018 B	52 Desert Shrub	68	0.001224
B-EDB	10477.76083	0.240536	0.000375 B	21 Low Intensity Resid*	65	0.024375
B-EDB	6631.659632	0.152241	0.000237 B	71 Grassland	61	0.014457
B-EDB	11250.87367	0.258284	0.000403 B	71 Grassland	61	0.024583
B-EDB	76278.50333	1.751113	0.002736 B	21 Low Intensity Resid*	65	0.17784
B-EDB	29056.84762	0.667053	0.001042 B	21 Low Intensity Resid*	65	0.06773
B-EDB	29036.11606	0.666577	0.001041 B	71 Grassland	61	0.063501
B-EDB	50709.47923	1.164129	0.001818 B	71 Grassland	61	0.110898
B-EDB	19371.23311	0.444702	0.000694 B	21 Low Intensity Resid*	65	0.04511
B-EDB	33574.54021	0.770765	0.001204 B	22 High Intensity Resi*	70	0.08428
B-EDB	116227.3932	2.668213	0.004169 B	21 Low Intensity Resid*	65	0.270985
B-EDB	16822.60972	0.386193	0.000603 B	21 Low Intensity Resid*	65	0.039195
B-EDB	59199.06748	1.359023	0.002123 B	21 Low Intensity Resid*	65	0.137995
B-EDB	8599.935964	0.197427	0.000308 B	21 Low Intensity Resid*	65	0.02002
B-EDB	2401694.517	55.135319	0.086148 B	52 Desert Shrub	68	5.858064
B-EDB	84695.61236	1.944343	0.003038 B	52 Desert Shrub	68	0.206584
B-EDB	1809326.014	41.536409	0.0649 B	52 Desert Shrub	68	4.4132
B-EDB	112882.0667	2.591415	0.004049 B	71 Grassland	61	0.246989
B-EDB	54113.03109	1.242264	0.001941 B	21 Low Intensity Resid*	65	0.126165
B-EDB	78458.14896	1.801151	0.002814 B	52 Desert Shrub	68	0.191352
B-EDB	211741.5153	4.860916	0.007595 B	52 Desert Shrub	68	0.51646
B-EDB	46725.64997	1.072673	0.001676 B	21 Low Intensity Resid*	65	0.10894

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-EDB	44749.06358	1.027297	0.001605	B	52	Desert Shrub	68	0.10914
B-EDB	68487.88221	1.572265	0.002456	B	71	Grassland	61	0.149816
B-EDB	29311.05507	0.672889	0.001051	B	71	Grassland	61	0.064111
B-EDB	12234.23926	0.280859	0.000438	B	21	Low Intensity Resid*	65	0.02847
B-EDB	38742.46592	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDB	29522.98683	0.677754	0.001058	B	21	Low Intensity Resid*	65	0.06877
B-EDB	19371.22832	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDB	38742.46649	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDB	19371.22772	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDB	36973.62576	0.848797	0.001326	B	22	High Intensity Resi*	70	0.09282
B-EDB	19371.22713	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDB	62231.15088	1.42863	0.002232	B	71	Grassland	61	0.136152
B-EDB	6631.661126	0.152241	0.000237	B	22	High Intensity Resi*	70	0.01659
B-EDB	37522.68414	0.861402	0.001345	B	22	High Intensity Resi*	70	0.09415
B-EDB	4848.185215	0.111299	0.000173	B	21	Low Intensity Resid*	65	0.011245
B-EDB	6631.669475	0.152242	0.000237	B	71	Grassland	61	0.014457
B-EDB	65335.34999	1.499893	0.002343	B	21	Low Intensity Resid*	65	0.152295
B-EDB	69985.38219	1.606643	0.00251	B	22	High Intensity Resi*	70	0.1757
B-EDB	38742.46831	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDB	5003.649635	0.114867	0.000179	B	71	Grassland	61	0.010919
B-EDB	47931.5133	1.100356	0.001719	B	21	Low Intensity Resid*	65	0.111735
B-EDB	29056.85213	0.667053	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-EDB	42295.05452	0.97096	0.001517	B	22	High Intensity Resi*	70	0.10619
B-EDB	28826.63396	0.661768	0.001034	B	21	Low Intensity Resid*	65	0.06721
B-EDB	6974.089468	0.160103	0.00025	B	21	Low Intensity Resid*	65	0.01625
B-EDB	42641.47938	0.978913	0.001529	B	71	Grassland	61	0.093269
B-EDB	12792.07103	0.293665	0.000458	B	22	High Intensity Resi*	70	0.03206
B-EDB	17185875.56	394.533415	0.616458	B	52	Desert Shrub	68	41.919144
B-EDB	4114367.183	94.452873	0.147582	B	52	Desert Shrub	68	10.035576
B-EDB	3961.951683	0.090953	0.000142	B	52	Desert Shrub	68	0.009656
B-EDB	2567.762387	0.058947	0.000092	B	21	Low Intensity Resid*	65	0.00598
B-EDB	137630.8369	3.159569	0.004936	B	52	Desert Shrub	68	0.335648
Sum =		0.989371			Sum =		67.09688	
CN(II) =		67.82			CN(III) =		82.90	

B-EDA	4446.853238	0.102085	0.000159	B	21	Low Intensity Resid*	65	0.010335
B-EDA	28750.3009	0.660016	0.001031	B	21	Low Intensity Resid*	65	0.067015
B-EDA	6625.763908	0.152106	0.000237	B	22	High Intensity Resi*	70	0.01659
B-EDA	93501.2583	2.146493	0.003353	B	22	High Intensity Resi*	70	0.23471
B-EDA	806912.0118	18.52415	0.028943	B	52	Desert Shrub	68	1.968124
B-EDA	51530.48545	1.182977	0.001848	B	21	Low Intensity Resid*	65	0.12012
B-EDA	69681.5293	1.599667	0.002499	B	22	High Intensity Resi*	70	0.17493
B-EDA	1089135.535	25.003111	0.039067	B	52	Desert Shrub	68	2.656556
B-EDA	1341.610376	0.030799	0.000048	B	52	Desert Shrub	68	0.003264
B-EDA	54784.22417	1.257672	0.001965	B	82	Row Crops	86	0.16899
B-EDA	63176.67284	1.450336	0.002266	B	22	High Intensity Resi*	70	0.15862
B-EDA	13072.79516	0.30011	0.000468	B	82	Row Crops	86	0.040248
B-EDA	32387.41718	0.743512	0.001161	B	71	Grassland	61	0.070821
B-EDA	4.434116	0.000101	1.59E-07	B	21	Low Intensity Resid*	65	1.03384E-05
B-EDA	328289.5842	7.536491	0.011775	B	21	Low Intensity Resid*	65	0.765375
B-EDA	222916.4971	5.117458	0.007996	B	52	Desert Shrub	68	0.543728
B-EDA	40029.86397	0.918959	0.001435	B	52	Desert Shrub	68	0.09758
B-EDA	5604.715062	0.128666	0.000201	B	52	Desert Shrub	68	0.013668
B-EDA	19017.32492	0.436577	0.000682	B	21	Low Intensity Resid*	65	0.04433
B-EDA	2986.972034	0.068571	0.000107	B	52	Desert Shrub	68	0.007276
B-EDA	19371.20774	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDA	2518.348359	0.057813	0.00009	B	52	Desert Shrub	68	0.00612
B-EDA	28755.73859	0.66014	0.001031	B	21	Low Intensity Resid*	65	0.067015
B-EDA	19371.20809	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDA	29898.62174	0.686377	0.001072	B	21	Low Intensity Resid*	65	0.06968
B-EDA	9685.602646	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-EDA	122624.9025	2.81508	0.004398	B	52	Desert Shrub	68	0.299064
B-EDA	404668.3022	9.289905	0.014515	B	52	Desert Shrub	68	0.98702
B-EDA	29056.80923	0.667052	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-EDA	91214.88785	2.094005	0.003271	B	52	Desert Shrub	68	0.222428
B-EDA	19388.25678	0.445093	0.000695	B	21	Low Intensity Resid*	65	0.045175
B-EDA	29056.79879	0.667052	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-EDA	6758.737822	0.155159	0.000242	B	23	Commercial	92	0.022264
B-EDA	115423.7095	2.649763	0.00414	B	21	Low Intensity Resid*	65	0.2691
B-EDA	2383.930755	0.054727	0.000085	B	21	Low Intensity Resid*	65	0.005525
B-EDA	149078.3991	3.422369	0.005347	B	52	Desert Shrub	68	0.363596
B-EDA	1043324.555	23.951436	0.037424	B	52	Desert Shrub	68	2.544832
B-EDA	48428.02875	1.111754	0.001737	B	21	Low Intensity Resid*	65	0.112905
B-EDA	6202.476401	0.142389	0.000222	B	52	Desert Shrub	68	0.015096
B-EDA	528.817833	0.012139	0.000018	B	22	High Intensity Resi*	70	0.00126
B-EDA	94644.10949	2.172729	0.003394	B	52	Desert Shrub	68	0.230792
B-EDA	3775.299431	0.086668	0.000135	B	82	Row Crops	86	0.01161
B-EDA	9885.421654	0.226938	0.000354	B	82	Row Crops	86	0.030444
B-EDA	149462.4852	3.431186	0.005361	B	21	Low Intensity Resid*	65	0.348465
B-EDA	652070.115	14.96947	0.023389	B	52	Desert Shrub	68	1.590452
B-EDA	3540.788715	0.081285	0.000127	B	21	Low Intensity Resid*	65	0.008255
B-EDA	56495.37211	1.296955	0.002026	B	52	Desert Shrub	68	0.137768
B-EDA	244311.663	5.608624	0.008763	B	21	Low Intensity Resid*	65	0.569595
B-EDA	9915.836171	0.227636	0.000355	B	21	Low Intensity Resid*	65	0.023075
B-EDA	32021.60422	0.735114	0.001148	B	21	Low Intensity Resid*	65	0.07462
B-EDA	692.240421	0.015891	0.000024	B	52	Desert Shrub	68	0.001632
B-EDA	7600.861036	0.174491	0.000272	B	52	Desert Shrub	68	0.018496
B-EDA	38742.4707	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDA	51179.36964	1.174916	0.001835	B	52	Desert Shrub	68	0.12478
B-EDA	40217.31701	0.923262	0.001442	B	21	Low Intensity Resid*	65	0.09373
B-EDA	67691.62826	1.553985	0.002428	B	21	Low Intensity Resid*	65	0.15782
B-EDA	73834.26774	1.695001	0.002648	B	21	Low Intensity Resid*	65	0.17212
B-EDA	63049.14867	1.447409	0.002261	B	22	High Intensity Resi*	70	0.15827
B-EDA	9685.622111	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-EDA	5.894122	0.000135	2.11E-07	B	22	High Intensity Resi*	70	1.47996E-05
B-EDA	19371.24339	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-EDA	6448670.76	148.04111	0.231314	B	52	Desert Shrub	68	15.729352
B-EDA	12.099746	0.000277	4.34E-07	B	71	Grassland	61	2.64751E-05
B-EDA	68360.27349	1.569335	0.002452	B	22	High Intensity Resi*	70	0.17164
B-EDA	29121.25504	0.668532	0.001044	B	52	Desert Shrub	68	0.070992
B-EDA	6631.659617	0.152241	0.000237	B	22	High Intensity Resi*	70	0.01659
B-EDA	125269.2771	2.875786	0.004493	B	22	High Intensity Resi*	70	0.31451
B-EDA	1216472.202	27.926359	0.043634	B	52	Desert Shrub	68	2.967112
B-EDA	38742.48989	0.889405	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDA	197209.6173	4.527309	0.007073	B	22	High Intensity Resi*	70	0.49511
B-EDA	84957.85582	1.950363	0.003047	B	52	Desert Shrub	68	0.207196
B-EDA	237164.9955	5.444559	0.008507	B	21	Low Intensity Resid*	65	0.552955
B-EDA	100580.9361	2.30902	0.003607	B	82	Row Crops	86	0.310202
B-EDA	477129.8731	10.953394	0.017114	B	52	Desert Shrub	68	1.163752
B-EDA	13319.90743	0.305782	0.000477	B	21	Low Intensity Resid*	65	0.031005
B-EDA	22234.71601	0.510438	0.000797	B	22	High Intensity Resi*	70	0.05579
B-EDA	74405.7045	1.708119	0.002668	B	21	Low Intensity Resid*	65	0.17342
B-EDA	201289.7903	4.620977	0.00722	B	52	Desert Shrub	68	0.49096
B-EDA	1253.399015	0.028774	0.000044	B	52	Desert Shrub	68	0.002992
B-EDA	128171.47	2.942412	0.004597	B	21	Low Intensity Resid*	65	0.298805
B-EDA	97596.17072	2.240499	0.0035	B	21	Low Intensity Resid*	65	0.2275
B-EDA	909432.7082	20.877702	0.032621	B	52	Desert Shrub	68	2.218228
B-EDA	362075.5518	8.31211	0.012987	B	82	Row Crops	86	1.116882
B-EDA	17859.0909	0.409988	0.00064	B	52	Desert Shrub	68	0.04352
Sum =		0.631201804		Sum =			43.10031861	
CN(II) =		68.28		CN(III) =			83.20	

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-EDC	27104.77179	0.622239	0.000972	B	21 Low Intensity Resid*	65	0.06318
B-EDC	169745.0419	3.896809	0.006088	B	21 Low Intensity Resid*	65	0.39572
B-EDC	87170.4604	2.001158	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-EDC	2137591.644	49.072351	0.076675	B	52 Desert Shrub	68	5.2139
B-EDC	190612.4157	4.375858	0.006837	B	21 Low Intensity Resid*	65	0.444405
B-EDC	40689.7021	0.934107	0.001459	B	21 Low Intensity Resid*	65	0.094835
B-EDC	48623.71962	1.116247	0.001744	B	71 Grassland	61	0.106384
B-EDC	2136879.948	49.056013	0.07665	B	52 Desert Shrub	68	5.2122
B-EDC	3018448.138	69.294034	0.108271	B	52 Desert Shrub	68	7.362428
B-EDC	49662.88258	1.140102	0.001781	B	52 Desert Shrub	68	0.121108
B-EDC	2481.47543	0.056966	0.000089	B	71 Grassland	61	0.005429
B-EDC	38683.17149	0.888043	0.001387	B	21 Low Intensity Resid*	65	0.090155
B-EDC	65200.55252	1.496798	0.002338	B	21 Low Intensity Resid*	65	0.15197
B-EDC	17654.94666	0.405301	0.000633	B	52 Desert Shrub	68	0.043044
B-EDC	32564.03836	0.747567	0.001168	B	52 Desert Shrub	68	0.079424
B-EDC	399.789869	0.009177	0.000014	B	52 Desert Shrub	68	0.000952
B-EDC	16726.69023	0.383991	0.000599	B	21 Low Intensity Resid*	65	0.038935
B-EDC	19839.63142	0.455455	0.000711	B	52 Desert Shrub	68	0.048348
B-EDC	69751.30239	1.601269	0.002501	B	21 Low Intensity Resid*	65	0.162565
B-EDC	1004044.73	23.049695	0.036015	B	52 Desert Shrub	68	2.44902
B-EDC	106541.5634	2.445857	0.003821	B	21 Low Intensity Resid*	65	0.248365
B-EDC	334254.0317	7.673416	0.011989	B	21 Low Intensity Resid*	65	0.779285
B-EDC	620.531093	0.014245	0.000022	B	52 Desert Shrub	68	0.001496
B-EDC	15167.47318	0.348197	0.000544	B	21 Low Intensity Resid*	65	0.03536
B-EDC	922705.2362	21.182397	0.033097	B	52 Desert Shrub	68	2.250596
B-EDC	27986.42719	0.642479	0.001003	B	21 Low Intensity Resid*	65	0.065195
B-EDC	19371.19971	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-EDC	240652.4206	5.524619	0.008632	B	21 Low Intensity Resid*	65	0.56108
B-EDC	19371.20054	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-EDC	2341.332295	0.053749	0.000083	B	21 Low Intensity Resid*	65	0.005395
B-EDC	2165.607724	0.049715	0.000077	B	52 Desert Shrub	68	0.005236
B-EDC	65.998744	0.001515	0.000002	B	52 Desert Shrub	68	0.000136
B-EDC	9685.600578	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-EDC	534758.5057	12.276366	0.019181	B	52 Desert Shrub	68	1.304308
B-EDC	551.051784	0.01265	0.000019	B	21 Low Intensity Resid*	65	0.001235
B-EDC	4113.299425	0.094428	0.000147	B	52 Desert Shrub	68	0.009996
B-EDC	10204.32736	0.234259	0.000366	B	21 Low Intensity Resid*	65	0.02379
B-EDC	6851.452727	0.157287	0.000245	B	71 Grassland	61	0.014945
B-EDC	3.542728	0.000081	1.27E-07	B	52 Desert Shrub	68	8.6413E-06
B-EDC	382582.146	8.782877	0.013723	B	52 Desert Shrub	68	0.933164
B-EDC	17872.18893	0.410289	0.000641	B	23 Commercial	92	0.058972
B-EDC	155527.2299	3.570413	0.005578	B	21 Low Intensity Resid*	65	0.36257
B-EDC	1373.836562	0.031538	0.000049	B	52 Desert Shrub	68	0.003332
B-EDC	24060.17648	0.552345	0.000863	B	21 Low Intensity Resid*	65	0.056095
B-EDC	15085515.11	346.315773	0.541118	B	52 Desert Shrub	68	36.796024
B-EDC	22601.28038	0.518854	0.00081	B	21 Low Intensity Resid*	65	0.05265
B-EDC	14523.04131	0.333403	0.00052	B	21 Low Intensity Resid*	65	0.0338
B-EDC	6631.653925	0.152241	0.000237	B	71 Grassland	61	0.014457
B-EDC	19371.22593	0.444702	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-EDC	38294.39771	0.879118	0.001373	B	21 Low Intensity Resid*	65	0.089245
B-EDC	19371.22534	0.444702	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-EDC	9685.612629	0.222351	0.000347	B	52 Desert Shrub	68	0.023596
B-EDC	44735.64402	1.026989	0.001604	B	52 Desert Shrub	68	0.109072
B-EDC	159317.2089	3.657419	0.005714	B	71 Grassland	61	0.348554
B-EDC	19371.22412	0.444702	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-EDC	9685.610665	0.222351	0.000347	B	52 Desert Shrub	68	0.023596
B-EDC	87170.66377	2.001163	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-EDC	41640.55807	0.955935	0.001493	B	71 Grassland	61	0.091073
B-EDC	6202.481094	0.142389	0.000222	B	21 Low Intensity Resid*	65	0.01443
B-EDC	637032.4203	14.624252	0.02285	B	52 Desert Shrub	68	1.5538
B-EDC	6631.657199	0.152241	0.000237	B	71 Grassland	61	0.014457
B-EDC	48428.06609	1.111755	0.001737	B	71 Grassland	61	0.105957
B-EDC	19371.22415	0.444702	0.000694	B	21 Low Intensity Resid*	65	0.04511

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-EDC	118067.7958	2.710463	0.004235	B	21 Low Intensity Resid*	65	0.275275
B-EDC	91374.15863	2.097662	0.003277	B	21 Low Intensity Resid*	65	0.213005
B-EDC	850391.5894	19.522304	0.030503	B	52 Desert Shrub	68	2.074204
B-EDC	29056.82305	0.667052	0.001042	B	21 Low Intensity Resid*	65	0.06773
B-EDC	164655.2847	3.779965	0.005906	B	21 Low Intensity Resid*	65	0.38389
B-EDC	207963.5251	4.774185	0.007459	B	21 Low Intensity Resid*	65	0.484835
B-EDC	38742.43131	0.889403	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-EDC	73537.74434	1.688194	0.002637	B	71 Grassland	61	0.160857
B-EDC	1353296.252	31.067407	0.048542	B	52 Desert Shrub	68	3.300856
B-EDC	781.675309	0.017944	0.000028	B	71 Grassland	61	0.001708
B-EDC	33790.19492	0.775716	0.001212	B	21 Low Intensity Resid*	65	0.07878
B-EDC	1460278.155	33.523373	0.05238	B	52 Desert Shrub	68	3.56184
B-EDC	2572.23266	0.05905	0.000092	B	52 Desert Shrub	68	0.006256
B-EDC	1054014.194	24.196836	0.037807	B	52 Desert Shrub	68	2.570876
B-EDC	57726.7764	1.325224	0.00207	B	21 Low Intensity Resid*	65	0.13455
B-EDC	56861.61006	1.305362	0.002039	B	21 Low Intensity Resid*	65	0.132535
B-EDC	555145.3004	12.744382	0.019913	B	52 Desert Shrub	68	1.354084
B-EDC	42430.85287	0.974078	0.001521	B	52 Desert Shrub	68	0.103428
B-EDC	77065.09801	1.769171	0.002764	B	21 Low Intensity Resid*	65	0.17966
B-EDC	125513.4775	2.881392	0.004502	B	21 Low Intensity Resid*	65	0.29263
B-EDC	1261535.056	28.960859	0.045251	B	52 Desert Shrub	68	3.077068
	Sum =	1.289955127			Sum =		87.31921964

CN(II) = 67.69 CN(III) = 82.81

B-LIA	3324.817551	0.076327	0.000119	B	71 Grassland	61	0.007259
B-LIA	58108.58209	1.333989	0.002084	B	82 Row Crops	86	0.179224
B-LIA	34698.66422	0.796571	0.001244	B	21 Low Intensity Resid*	65	0.08086
B-LIA	56831.95436	1.304682	0.002038	B	52 Desert Shrub	68	0.138584
B-LIA	41.722022	0.000957	0.000001	B	22 High Intensity Resi*	70	0.00007
B-LIA	94805.29569	2.17643	0.0034	B	21 Low Intensity Resid*	65	0.221
B-LIA	166303.8746	3.817811	0.005965	B	82 Row Crops	86	0.51299
B-LIA	11255.75049	0.258396	0.000403	B	71 Grassland	61	0.024583
B-LIA	11732.0123	0.269329	0.00042	B	52 Desert Shrub	68	0.02856
B-LIA	194311.2183	4.460771	0.006969	B	82 Row Crops	86	0.599334
B-LIA	9685.625332	0.222351	0.000347	B	71 Grassland	61	0.021167
B-LIA	9685.62557	0.222351	0.000347	B	71 Grassland	61	0.021167
B-LIA	9685.625304	0.222351	0.000347	B	82 Row Crops	86	0.029842
B-LIA	39504.75214	0.906904	0.001417	B	82 Row Crops	86	0.121862
B-LIA	154417.1259	3.544929	0.005538	B	71 Grassland	61	0.337818
B-LIA	257715.1594	5.916325	0.009244	B	82 Row Crops	86	0.794984
B-LIA	15100.10495	0.34665	0.000541	B	21 Low Intensity Resid*	65	0.035165
B-LIA	13269.44331	0.304624	0.000475	B	82 Row Crops	86	0.04085
B-LIA	28645.0719	0.6576	0.001027	B	22 High Intensity Resi*	70	0.07189
B-LIA	64622.21852	1.483522	0.002318	B	71 Grassland	61	0.141398
B-LIA	6384.259477	0.146562	0.000229	B	71 Grassland	61	0.013969
B-LIA	2518.870346	0.057825	0.00009	B	52 Desert Shrub	68	0.00612
B-LIA	1367.866921	0.031401	0.000049	B	82 Row Crops	86	0.004214
B-LIA	221702.0391	5.089578	0.007952	B	82 Row Crops	86	0.683872
B-LIA	2793.21016	0.064123	0.0001	B	82 Row Crops	86	0.0086
B-LIA	3888155.355	89.259764	0.139468	B	52 Desert Shrub	68	9.483824
B-LIA	949354.0615	21.79417	0.034053	B	52 Desert Shrub	68	2.315604
B-LIA	80196.64838	1.841061	0.002876	B	21 Low Intensity Resid*	65	0.18694
B-LIA	120815.8042	2.773549	0.004333	B	21 Low Intensity Resid*	65	0.281645
B-LIA	19479.04354	0.447177	0.000698	B	21 Low Intensity Resid*	65	0.04537
B-LIA	440.899555	0.010121	0.000015	B	71 Grassland	61	0.000915
B-LIA	13336.38183	0.306161	0.000478	B	21 Low Intensity Resid*	65	0.03107
B-LIA	131518.5512	3.01925	0.004717	B	71 Grassland	61	0.287737
B-LIA	85468.45479	1.962085	0.003065	B	52 Desert Shrub	68	0.20842
B-LIA	6631.67456	0.152242	0.000237	B	52 Desert Shrub	68	0.016116
B-LIA	72294.59099	1.659655	0.002593	B	71 Grassland	61	0.158173
B-LIA	90011.74176	2.066385	0.003228	B	82 Row Crops	86	0.277608

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-LIA	6631.674062	0.152242	0.000237	B	52	Desert Shrub	68	0.016116
B-LIA	76957.50815	1.766701	0.00276	B	21	Low Intensity Resid*	65	0.1794
B-LIA	99.521873	0.002284	0.000003	B	22	High Intensity Resi*	70	0.00021
B-LIA	14790.6967	0.339547	0.00053	B	21	Low Intensity Resid*	65	0.03445
B-LIA	6631.673804	0.152242	0.000237	B	52	Desert Shrub	68	0.016116
B-LIA	17050.4986	0.391425	0.000611	B	52	Desert Shrub	68	0.041548
B-LIA	34251.86578	0.786314	0.001228	B	82	Row Crops	86	0.105608
B-LIA	31170.75293	0.715582	0.001118	B	21	Low Intensity Resid*	65	0.07267
B-LIA	65523.16041	1.504204	0.00235	B	82	Row Crops	86	0.2021
B-LIA	20451.02321	0.46949	0.000733	B	22	High Intensity Resi*	70	0.05131
B-LIA	14131.69779	0.324419	0.000506	B	71	Grassland	61	0.030866
B-LIA	47329.09737	1.086526	0.001697	B	71	Grassland	61	0.103517
B-LIA	19371.23805	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-LIA	38742.47678	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-LIA	38742.47736	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-LIA	1232422.311	28.292523	0.044207	B	82	Row Crops	86	3.801802
B-LIA	33224.09543	0.76272	0.001191	B	71	Grassland	61	0.072651
B-LIA	38742.47794	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-LIA	19371.25026	0.444702	0.000694	B	71	Grassland	61	0.042334
B-LIA	20727.81562	0.475845	0.000743	B	21	Low Intensity Resid*	65	0.048295
B-LIA	22439.26011	0.515134	0.000804	B	71	Grassland	61	0.049044
B-LIA	77257.99774	1.773599	0.002771	B	71	Grassland	61	0.169031
B-LIA	21224.14937	0.487239	0.000761	B	71	Grassland	61	0.046421
B-LIA	9685.626034	0.222351	0.000347	B	71	Grassland	61	0.021167
B-LIA	296960.7089	6.817279	0.010651	B	71	Grassland	61	0.649711
B-LIA	22439.27999	0.515134	0.000804	B	71	Grassland	61	0.049044
B-LIA	155139.4678	3.561512	0.005564	B	71	Grassland	61	0.339404
B-LIA	87170.67979	2.001163	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-LIA	96856.28472	2.223514	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-LIA	87170.63304	2.001162	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-LIA	1502.813533	0.034499	0.000053	B	21	Low Intensity Resid*	65	0.003445
B-LIA	23310190.82	535.128347	0.836138	B	52	Desert Shrub	68	56.857384
B-LIA	6202.493404	0.142389	0.000222	B	52	Desert Shrub	68	0.015096
B-LIA	9685.632314	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LIA	1886907.034	43.317425	0.067683	B	52	Desert Shrub	68	4.602444
B-LIA	37303.14115	0.856362	0.001338	B	21	Low Intensity Resid*	65	0.08697
B-LIA	33092.37991	0.759696	0.001187	B	52	Desert Shrub	68	0.080716
B-LIA	1320492.757	30.314342	0.047366	B	52	Desert Shrub	68	3.220888
B-LIA	1679470.842	38.555345	0.060242	B	21	Low Intensity Resid*	65	3.91573
B-LIA	1311491.247	30.107696	0.047043	B	52	Desert Shrub	68	3.198924
Sum =		1.405178			Sum =		96.513926	
CN(II) =		68.68			CN(III) =		83.46	

B-QLA	15704.10714	0.360516	0.000563	B	22	High Intensity Resi*	70	0.03941
B-QLA	16040.6325	0.368242	0.000575	B	71	Grassland	61	0.035075
B-QLA	912.970153	0.020958	0.000032	B	71	Grassland	61	0.001952
B-QLA	10440.5842	0.239682	0.000374	B	21	Low Intensity Resid*	65	0.02431
B-QLA	2521.050763	0.057875	0.00009	B	71	Grassland	61	0.00549
B-QLA	1895.603691	0.043517	0.000067	B	52	Desert Shrub	68	0.004556
B-QLA	10207.87468	0.23434	0.000366	B	71	Grassland	61	0.022326
B-QLA	33167.75407	0.761426	0.001189	B	21	Low Intensity Resid*	65	0.077285
B-QLA	255819.2747	5.872802	0.009176	B	52	Desert Shrub	68	0.623968
B-QLA	5.680207	0.00013	2.04E-07	B	22	High Intensity Resi*	70	1.42625E-05
B-QLA	167077.0456	3.835561	0.005993	B	82	Row Crops	86	0.515398
B-QLA	27886.44115	0.640184	0.001	B	21	Low Intensity Resid*	65	0.065
B-QLA	27451.50151	0.630199	0.000984	B	82	Row Crops	86	0.084624
B-QLA	107910.4932	2.477284	0.00387	B	82	Row Crops	86	0.33282
B-QLA	116750.5426	2.680223	0.004187	B	52	Desert Shrub	68	0.284716
B-QLA	54400.87931	1.248872	0.001951	B	82	Row Crops	86	0.167786
B-QLA	473117.3208	10.861279	0.01697	B	82	Row Crops	86	1.45942
B-QLA	4112.786424	0.094416	0.000147	B	52	Desert Shrub	68	0.009996

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-QLA	154561.7757	3.54825	0.005544	B	82	Row Crops	86	0.476784
B-QLA	44997.22708	1.032994	0.001614	B	21	Low Intensity Resid*	65	0.10491
B-QLA	6631.651707	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-QLA	118734.0968	2.725759	0.004258	B	82	Row Crops	86	0.366188
B-QLA	19371.21514	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-QLA	6631.652808	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-QLA	142592.6451	3.273476	0.005114	B	82	Row Crops	86	0.439804
B-QLA	6631.654253	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-QLA	19371.21782	0.444701	0.000694	B	82	Row Crops	86	0.059684
B-QLA	67180.11748	1.542243	0.002409	B	82	Row Crops	86	0.207174
B-QLA	75725.02221	1.738407	0.002716	B	82	Row Crops	86	0.233576
B-QLA	87170.4957	2.001159	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	85182.48966	1.95552	0.003055	B	11	Open Water	98	0.29939
B-QLA	19371.22181	0.444702	0.000694	B	82	Row Crops	86	0.059684
B-QLA	1716.349917	0.039401	0.000061	B	52	Desert Shrub	68	0.004148
B-QLA	87170.53876	2.00116	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	1124.957811	0.025825	0.00004	B	52	Desert Shrub	68	0.00272
B-QLA	141207.9052	3.241687	0.005065	B	11	Open Water	98	0.49637
B-QLA	881.448222	0.020235	0.000031	B	21	Low Intensity Resid*	65	0.002015
B-QLA	782127.2588	17.955171	0.028054	B	52	Desert Shrub	68	1.907672
B-QLA	18187.86443	0.417535	0.000652	B	52	Desert Shrub	68	0.044336
B-QLA	19371.22156	0.444702	0.000694	B	52	Desert Shrub	68	0.047192
B-QLA	9685.6105	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	161823.3266	3.714952	0.005804	B	11	Open Water	98	0.568792
B-QLA	9685.611197	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	174197.5431	3.999025	0.006248	B	21	Low Intensity Resid*	65	0.40612
B-QLA	9685.610475	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLA	9685.610235	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	75049.06268	1.722889	0.002692	B	21	Low Intensity Resid*	65	0.17498
B-QLA	67651.79011	1.553071	0.002426	B	52	Desert Shrub	68	0.164968
B-QLA	9685.610208	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLA	5619.764711	0.129012	0.000201	B	21	Low Intensity Resid*	65	0.013065
B-QLA	9685.610183	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-QLA	86023.64125	1.974831	0.003085	B	52	Desert Shrub	68	0.20978
B-QLA	29056.82939	0.667053	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-QLA	9685.609891	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-QLA	53158.1275	1.220342	0.001906	B	71	Grassland	61	0.116266
B-QLA	9685.6096	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-QLA	34324.08381	0.787972	0.001231	B	21	Low Intensity Resid*	65	0.080015
B-QLA	9685.609335	0.22235	0.000347	B	82	Row Crops	86	0.029842
B-QLA	19371.21755	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-QLA	2092.289883	0.048032	0.000075	B	71	Grassland	61	0.004575
B-QLA	9685.611177	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	96856.09743	2.22351	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-QLA	19371.21807	0.444701	0.000694	B	82	Row Crops	86	0.059684
B-QLA	19371.21759	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-QLA	13227.44234	0.30366	0.000474	B	71	Grassland	61	0.028914
B-QLA	19371.21702	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-QLA	170207.532	3.907427	0.006105	B	71	Grassland	61	0.372405
B-QLA	38742.43841	0.889404	0.001389	B	82	Row Crops	86	0.119454
B-QLA	6202.478437	0.142389	0.000222	B	21	Low Intensity Resid*	65	0.01443
B-QLA	2723282.071	62.517953	0.097684	B	82	Row Crops	86	8.400824
B-QLA	43356.2622	0.995322	0.001555	B	82	Row Crops	86	0.13373
B-QLA	6631.654947	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	344028.8415	7.897815	0.01234	B	52	Desert Shrub	68	0.83912
B-QLA	454917.1276	10.44346	0.016317	B	71	Grassland	61	0.995337
B-QLA	9685.609083	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	9685.608846	0.22235	0.000347	B	71	Grassland	61	0.021167
B-QLA	70796.38461	1.625261	0.002539	B	21	Low Intensity Resid*	65	0.165035
B-QLA	302110.2586	6.935497	0.010836	B	21	Low Intensity Resid*	65	0.70434
B-QLA	5105282.877	117.201167	0.183126	B	52	Desert Shrub	68	12.452568
B-QLA	171682.1833	3.94128	0.006158	B	71	Grassland	61	0.375638
B-QLA	6202.476932	0.142389	0.000222	B	52	Desert Shrub	68	0.015096

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-QLA	32075.43624	0.73635	0.00115	B	71	Grassland	61	0.07015
B-QLA	9685.608589	0.22235	0.000347	B	71	Grassland	61	0.021167
B-QLA	70534.1382	1.619241	0.00253	B	21	Low Intensity Resid*	65	0.16445
B-QLA	13075.50522	0.300172	0.000469	B	71	Grassland	61	0.028609
B-QLA	9685.610901	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	580775.0668	13.33276	0.020832	B	52	Desert Shrub	68	1.416576
B-QLA	248249.8023	5.699031	0.008904	B	71	Grassland	61	0.543144
B-QLA	643937.8023	14.782777	0.023098	B	71	Grassland	61	1.408978
B-QLA	9685.61077	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	9685.610529	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	6202.478058	0.142389	0.000222	B	71	Grassland	61	0.013542
B-QLA	9685.610502	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	6269.322883	0.143923	0.000224	B	71	Grassland	61	0.013664
B-QLA	9685.610238	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	19371.21976	0.444702	0.000694	B	71	Grassland	61	0.042334
B-QLA	87170.56557	2.00116	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	539442.3813	12.383893	0.019349	B	82	Row Crops	86	1.664014
B-QLA	221.63856	0.005088	0.000007	B	71	Grassland	61	0.000427
B-QLA	167106.3788	3.836234	0.005994	B	52	Desert Shrub	68	0.407592
B-QLA	9685.609126	0.22235	0.000347	B	71	Grassland	61	0.021167
B-QLA	135370.6786	3.107683	0.004855	B	71	Grassland	61	0.296155
B-QLA	5779.43183	0.132677	0.000207	B	52	Desert Shrub	68	0.014076
B-QLA	384124.7426	8.81829	0.013778	B	71	Grassland	61	0.840458
B-QLA	73550.41543	1.688485	0.002638	B	82	Row Crops	86	0.226868
B-QLA	6631.657108	0.152241	0.000237	B	71	Grassland	61	0.014457
B-QLA	20294.03015	0.465886	0.000727	B	21	Low Intensity Resid*	65	0.047255
B-QLA	9685.61307	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-QLA	35423.6976	0.813216	0.00127	B	52	Desert Shrub	68	0.08636
B-QLA	35450.84948	0.813839	0.001271	B	52	Desert Shrub	68	0.086428
B-QLA	38742.45066	0.889404	0.001389	B	82	Row Crops	86	0.119454
B-QLA	87170.47583	2.001158	0.003126	B	71	Grassland	61	0.190686
B-QLA	6631.657336	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	21901.41114	0.502787	0.000785	B	52	Desert Shrub	68	0.05338
B-QLA	222769.0837	5.114074	0.00799	B	21	Low Intensity Resid*	65	0.51935
B-QLA	9685.607948	0.22235	0.000347	B	71	Grassland	61	0.021167
B-QLA	52575.09652	1.206958	0.001885	B	71	Grassland	61	0.114985
B-QLA	58113.66618	1.334106	0.002084	B	52	Desert Shrub	68	0.141712
B-QLA	995.793539	0.02286	0.000035	B	71	Grassland	61	0.002135
B-QLA	35154.0704	0.807026	0.00126	B	71	Grassland	61	0.07686
B-QLA	19371.2142	0.444701	0.000694	B	82	Row Crops	86	0.059684
B-QLA	9685.613621	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	53264.50752	1.222784	0.00191	B	52	Desert Shrub	68	0.12988
B-QLA	13225.41481	0.303613	0.000474	B	52	Desert Shrub	68	0.032232
B-QLA	9685.607376	0.22235	0.000347	B	71	Grassland	61	0.021167
B-QLA	9685.607142	0.22235	0.000347	B	82	Row Crops	86	0.029842
B-QLA	2147.423848	0.049298	0.000077	B	71	Grassland	61	0.004697
B-QLA	48428.06245	1.111755	0.001737	B	21	Low Intensity Resid*	65	0.112905
B-QLA	29056.83067	0.667053	0.001042	B	52	Desert Shrub	68	0.070856
B-QLA	120162.849	2.758559	0.00431	B	71	Grassland	61	0.26291
B-QLA	9454.284783	0.21704	0.000339	B	82	Row Crops	86	0.029154
B-QLA	69261.11098	1.590016	0.002484	B	52	Desert Shrub	68	0.168912
B-QLA	6631.655289	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	6631.655462	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	6631.654797	0.152241	0.000237	B	71	Grassland	61	0.014457
B-QLA	848502.8306	19.478944	0.030435	B	82	Row Crops	86	2.61741
B-QLA	270211.504	6.203202	0.009692	B	71	Grassland	61	0.591212
B-QLA	6631.658851	0.152241	0.000237	B	71	Grassland	61	0.014457
B-QLA	64182.18594	1.47342	0.002302	B	71	Grassland	61	0.140422
B-QLA	6202.478171	0.142389	0.000222	B	71	Grassland	61	0.013542
B-QLA	9685.608561	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	6202.484283	0.142389	0.000222	B	71	Grassland	61	0.013542
B-QLA	87170.5413	2.00116	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	46606.09302	1.069928	0.001671	B	71	Grassland	61	0.101931

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B-QLA	6631.653957	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	6631.657568	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-QLA	6202.479054	0.142389	0.000222	B	71	Grassland	61	0.013542
B-QLA	9685.609936	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	6202.480877	0.142389	0.000222	B	52	Desert Shrub	68	0.015096
B-QLA	11255.73704	0.258396	0.000403	B	71	Grassland	61	0.024583
B-QLA	13072.78829	0.300109	0.000468	B	52	Desert Shrub	68	0.031824
B-QLA	43449.01314	0.997452	0.001558	B	82	Row Crops	86	0.133988
B-QLA	2396284.231	55.011116	0.085954	B	71	Grassland	61	5.243194
B-QLA	9685.615	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	9685.613765	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	9685.613519	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	81030.59345	1.860206	0.002906	B	21	Low Intensity Resid*	65	0.18889
B-QLA	3884546.135	89.176908	0.139338	B	52	Desert Shrub	68	9.474984
B-QLA	36148.45561	0.829854	0.001296	B	71	Grassland	61	0.079056
B-QLA	60735.93581	1.394305	0.002178	B	71	Grassland	61	0.132858
B-QLA	914.971142	0.021004	0.000032	B	82	Row Crops	86	0.002752
B-QLA	69967.69452	1.606237	0.002509	B	52	Desert Shrub	68	0.170612
B-QLA	38742.46104	0.889404	0.001389	B	71	Grassland	61	0.084729
B-QLA	96856.14432	2.223511	0.003474	B	52	Desert Shrub	68	0.236232
B-QLA	9685.613712	0.222351	0.000347	B	71	Grassland	61	0.021167
B-QLA	13226.07832	0.303628	0.000474	B	71	Grassland	61	0.028914
B-QLA	6202.476342	0.142389	0.000222	B	82	Row Crops	86	0.019092
B-QLA	29056.83885	0.667053	0.001042	B	71	Grassland	61	0.063562
B-QLA	9685.607908	0.22235	0.000347	B	82	Row Crops	86	0.029842
B-QLA	911520.9411	20.925641	0.032696	B	71	Grassland	61	1.994456
B-QLA	1488.983907	0.034182	0.000053	B	52	Desert Shrub	68	0.003604
B-QLA	70562.5548	1.619893	0.002531	B	21	Low Intensity Resid*	65	0.164515
B-QLA	2077275.887	47.687692	0.074512	B	52	Desert Shrub	68	5.066816
B-QLA	44009.69643	1.010323	0.001578	B	71	Grassland	61	0.096258
B-QLA	190248.8206	4.367511	0.006824	B	21	Low Intensity Resid*	65	0.44356
B-QLA	975180.9815	22.387074	0.034979	B	52	Desert Shrub	68	2.378572
B-QLA	69463.98077	1.594673	0.002491	B	71	Grassland	61	0.151951
B-QLA	63604.55431	1.460159	0.002281	B	82	Row Crops	86	0.196166
B-QLA	135546.9266	3.111729	0.004862	B	21	Low Intensity Resid*	65	0.31603
B-QLA	73482.91271	1.686935	0.002635	B	21	Low Intensity Resid*	65	0.171275
B-QLA	110.687407	0.002541	0.000003	B	71	Grassland	61	0.000183
B-QLA	11526.02911	0.264601	0.000413	B	21	Low Intensity Resid*	65	0.026845
B-QLA	101802.9742	2.337074	0.003651	B	82	Row Crops	86	0.313986
B-QLA	1892167.774	43.438194	0.067872	B	52	Desert Shrub	68	4.615296
B-QLA	1321.462778	0.030336	0.000047	B	82	Row Crops	86	0.004042
B-QLA	170920.8682	3.923803	0.00613	B	52	Desert Shrub	68	0.41684
B-QLA	1721.043901	0.039509	0.000061	B	21	Low Intensity Resid*	65	0.003965
B-QLA	89855.90675	2.062807	0.003223	B	52	Desert Shrub	68	0.219164
B-QLA	2033.193686	0.046675	0.000072	B	82	Row Crops	86	0.006192
B-QLA	9627.307037	0.221012	0.000345	B	52	Desert Shrub	68	0.02346
B-QLA	1491.808193	0.034247	0.000053	B	82	Row Crops	86	0.004558
B-QLA	418949.2339	9.617751	0.015027	B	21	Low Intensity Resid*	65	0.976755
B-QLA	78121.15726	1.793414	0.002802	B	71	Grassland	61	0.170922
B-QLA	23538.76049	0.540375	0.000844	B	21	Low Intensity Resid*	65	0.05486
B-QLA	6631.652647	0.152241	0.000237	B	71	Grassland	61	0.014457
B-QLA	641660.7664	14.730504	0.023016	B	52	Desert Shrub	68	1.565088
B-QLA	2292.621415	0.052631	0.000082	B	71	Grassland	61	0.005002
B-QLA	104006.7454	2.387666	0.00373	B	21	Low Intensity Resid*	65	0.24245
B-QLA	13072.78341	0.300109	0.000468	B	21	Low Intensity Resid*	65	0.03042
B-QLA	2080785.128	47.768253	0.074637	B	52	Desert Shrub	68	5.075316
B-QLA	41706.64956	0.957452	0.001496	B	21	Low Intensity Resid*	65	0.09724
B-QLA	1261128.132	28.951518	0.045236	B	52	Desert Shrub	68	3.076048
B-QLA	6631.651337	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-QLA	26129.17582	0.599843	0.000937	B	21	Low Intensity Resid*	65	0.060905
B-QLA	676454.0017	15.529247	0.024264	B	21	Low Intensity Resid*	65	1.57716
B-QLA	134100.7744	3.07853	0.00481	B	71	Grassland	61	0.29341
B-QLA	49158.12224	1.128515	0.001763	B	71	Grassland	61	0.107543

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B-QLA	41429.89513	0.951099	0.001486	B	21 Low Intensity Resid*	65	0.09659
B-QLA	48853.81006	1.121529	0.001752	B	21 Low Intensity Resid*	65	0.11388
B-QLA	194745.6202	4.470744	0.006985	B	71 Grassland	61	0.426085
B-QLA	189002.7265	4.338905	0.006779	B	82 Row Crops	86	0.582994
B-QLA	83.983023	0.001927	0.000003	B	21 Low Intensity Resid*	65	0.000195
B-QLA	16374.03972	0.375896	0.000587	B	21 Low Intensity Resid*	65	0.038155
B-QLA	77484.84878	1.778807	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-QLA	77484.83383	1.778807	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-QLA	77484.81912	1.778806	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-QLA	96856.00356	2.223507	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-QLA	12220517.77	280.544485	0.43835	B	52 Desert Shrub	68	29.8078
B-QLA	392.134357	0.009002	0.000014	B	21 Low Intensity Resid*	65	0.00091
B-QLA	6202.476531	0.142389	0.000222	B	82 Row Crops	86	0.019092
B-QLA	164155.0724	3.768481	0.005888	B	71 Grassland	61	0.359168
B-QLA	19371.2159	0.444701	0.000694	B	71 Grassland	61	0.042334
B-QLA	362.331114	0.008317	0.000012	B	71 Grassland	61	0.000732
B-QLA	71885.88044	1.650272	0.002578	B	82 Row Crops	86	0.221708
B-QLA	6202.476517	0.142389	0.000222	B	52 Desert Shrub	68	0.015096
B-QLA	133645.3802	3.068075	0.004793	B	71 Grassland	61	0.292373
B-QLA	13591.78476	0.312024	0.000487	B	52 Desert Shrub	68	0.033116
B-QLA	9685.607708	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-QLA	9685.607473	0.22235	0.000347	B	71 Grassland	61	0.021167
B-QLA	81419.35778	1.869131	0.00292	B	82 Row Crops	86	0.25112
B-QLA	76562.03563	1.757622	0.002746	B	21 Low Intensity Resid*	65	0.17849
B-QLA	9685.606902	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-QLA	9685.606668	0.22235	0.000347	B	71 Grassland	61	0.021167
B-QLA	87170.44752	2.001158	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-QLA	35152.88877	0.806999	0.00126	B	71 Grassland	61	0.07686
B-QLA	96856.03084	2.223508	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-QLA	9685.60685	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-QLA	87170.40833	2.001157	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-QLA	9035539.422	207.427443	0.324105	B	52 Desert Shrub	68	22.03914
B-QLA	13943.16171	0.32009	0.0005	B	71 Grassland	61	0.0305
B-QLA	19371.21253	0.444701	0.000694	B	52 Desert Shrub	68	0.047192
B-QLA	119558.7431	2.744691	0.004288	B	71 Grassland	61	0.261568
B-QLA	40844.94142	0.93767	0.001465	B	21 Low Intensity Resid*	65	0.095225
B-QLA	80431.03679	1.846442	0.002885	B	71 Grassland	61	0.175985
B-QLA	231.320474	0.00531	0.000008	B	82 Row Crops	86	0.000688
B-QLA	170024.5691	3.903227	0.006098	B	82 Row Crops	86	0.524428
B-QLA	102839.435	2.360868	0.003688	B	71 Grassland	61	0.224968
B-QLA	6631.650398	0.152241	0.000237	B	71 Grassland	61	0.014457
B-QLA	48487.85524	1.113127	0.001739	B	21 Low Intensity Resid*	65	0.113035
B-QLA	5716.677942	0.131236	0.000205	B	82 Row Crops	86	0.01763
B-QLA	5841.027783	0.134091	0.000209	B	21 Low Intensity Resid*	65	0.013585
B-QLA	19247.66999	0.441865	0.00069	B	21 Low Intensity Resid*	65	0.04485
B-QLA	376140.1948	8.63499	0.013492	B	82 Row Crops	86	1.160312
B-QLA	7108.314492	0.163184	0.000254	B	52 Desert Shrub	68	0.017272
B-QLA	6140986.803	140.977658	0.220277	B	52 Desert Shrub	68	14.978836
B-QLA	108650.3985	2.494269	0.003897	B	21 Low Intensity Resid*	65	0.253305
B-QLA	118801.9522	2.727317	0.004261	B	71 Grassland	61	0.259921
B-QLA	250586.5548	5.752675	0.008988	B	52 Desert Shrub	68	0.611184
B-QLA	11736.99058	0.269444	0.000421	B	52 Desert Shrub	68	0.028628
B-QLA	127339.1571	2.923304	0.004567	B	82 Row Crops	86	0.392762
B-QLA	800.436934	0.018375	0.000028	B	22 High Intensity Resi*	70	0.00196
B-QLA	17941.70814	0.411884	0.000643	B	52 Desert Shrub	68	0.043724
B-QLA	95325.27217	2.188367	0.003419	B	21 Low Intensity Resid*	65	0.222235
B-QLA	331664.9926	7.61398	0.011896	B	52 Desert Shrub	68	0.808928
B-QLA	94523.55761	2.169962	0.00339	B	21 Low Intensity Resid*	65	0.22035
B-QLA	148.854093	0.003417	0.000005	B	52 Desert Shrub	68	0.00034
B-QLA	364.693376	0.008372	0.000013	B	82 Row Crops	86	0.001118
B-QLA	184328.2196	4.231593	0.006611	B	21 Low Intensity Resid*	65	0.429715
B-QLA	3764.659059	0.086424	0.000135	B	82 Row Crops	86	0.01161
B-QLA	95135.02748	2.183999	0.003412	B	21 Low Intensity Resid*	65	0.22178

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B-QLA	1112402.796	25.537254	0.039901	B	52	Desert Shrub	68	2.713268
B-QLA	1051478.906	24.138634	0.037716	B	52	Desert Shrub	68	2.564688
B-QLA	103442.9447	2.374723	0.00371	B	21	Low Intensity Resid*	65	0.24115
B-QLA	6137.844279	0.140905	0.00022	B	52	Desert Shrub	68	0.01496
B-QLA	419194.0657	9.623371	0.015036	B	52	Desert Shrub	68	1.022448
B-QLA	50378.68096	1.156535	0.001807	B	71	Grassland	61	0.110227
B-QLA	15457.28769	0.35485	0.000554	B	22	High Intensity Resi*	70	0.03878
B-QLA	26024.87625	0.597448	0.000933	B	71	Grassland	61	0.056913
B-QLA	10739.57493	0.246546	0.000385	B	52	Desert Shrub	68	0.02618
B-QLA	55709.12828	1.278905	0.001998	B	71	Grassland	61	0.121878
B-QLA	36772.92323	0.84419	0.001319	B	21	Low Intensity Resid*	65	0.085735
B-QLA	53585.53766	1.230154	0.001922	B	22	High Intensity Resi*	70	0.13454
B-QLA	17727.4781	0.406966	0.000635	B	71	Grassland	61	0.038735
B-QLA	7790.018919	0.178834	0.000279	B	52	Desert Shrub	68	0.018972
B-QLA	11680.76328	0.268153	0.000418	B	71	Grassland	61	0.025498
B-QLA	58625.53141	1.345857	0.002102	B	21	Low Intensity Resid*	65	0.13663
B-QLA	669250.3647	15.363874	0.024006	B	52	Desert Shrub	68	1.632408
B-QLA	51572.78277	1.183948	0.001849	B	22	High Intensity Resi*	70	0.12943
B-QLA	13226.08883	0.303629	0.000474	B	21	Low Intensity Resid*	65	0.03081
B-QLA	16316.95715	0.374585	0.000585	B	21	Low Intensity Resid*	65	0.038025
B-QLA	391920.0348	8.997245	0.014058	B	52	Desert Shrub	68	0.955944
B-QLA	9685.615113	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-QLA	30684.66767	0.704423	0.0011	B	21	Low Intensity Resid*	65	0.0715
B-QLA	274.351054	0.006298	0.000009	B	52	Desert Shrub	68	0.000612
B-QLA	13226.08096	0.303629	0.000474	B	52	Desert Shrub	68	0.032232
B-QLA	38742.47471	0.889404	0.001389	B	52	Desert Shrub	68	0.094452
B-QLA	19371.23634	0.444702	0.000694	B	82	Row Crops	86	0.059684
B-QLA	77484.92682	1.778809	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-QLA	175284.5654	4.023979	0.006287	B	52	Desert Shrub	68	0.427516
B-QLA	656.485708	0.01507	0.000023	B	82	Row Crops	86	0.001978
B-QLA	77484.91073	1.778808	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-QLA	298376.6069	6.849784	0.010702	B	21	Low Intensity Resid*	65	0.69563
B-QLA	13072.7794	0.30011	0.000468	B	21	Low Intensity Resid*	65	0.03042
B-QLA	87170.49957	2.001159	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	475235.2398	10.909899	0.017046	B	52	Desert Shrub	68	1.159128
B-QLA	15160.98332	0.348048	0.000543	B	82	Row Crops	86	0.046698
B-QLA	2458163.3	56.431664	0.088174	B	82	Row Crops	86	7.582964
B-QLA	51858.91151	1.190516	0.00186	B	21	Low Intensity Resid*	65	0.1209
B-QLA	18014.66663	0.413559	0.000646	B	21	Low Intensity Resid*	65	0.04199
B-QLA	13511.62755	0.310184	0.000484	B	71	Grassland	61	0.029524
B-QLA	29056.85937	0.667053	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-QLA	6202.484049	0.142389	0.000222	B	82	Row Crops	86	0.019092
B-QLA	6202.48758	0.142389	0.000222	B	71	Grassland	61	0.013542
B-QLA	6631.66039	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-QLA	428951.838	9.847379	0.015386	B	82	Row Crops	86	1.323196
B-QLA	134868.8317	3.096162	0.004837	B	71	Grassland	61	0.295057
B-QLA	38742.47979	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-QLA	95353.42001	2.189013	0.00342	B	21	Low Intensity Resid*	65	0.2223
B-QLA	930744.9953	21.366964	0.033385	B	52	Desert Shrub	68	2.27018
B-QLA	96856.18396	2.223512	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-QLA	12630.16785	0.289948	0.000453	B	21	Low Intensity Resid*	65	0.029445
B-QLA	87170.54377	2.00116	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-QLA	4426856.95	101.626651	0.158791	B	52	Desert Shrub	68	10.797788
B-QLA	25030.87235	0.574629	0.000897	B	52	Desert Shrub	68	0.060996
B-QLA	13225.42237	0.303613	0.000474	B	82	Row Crops	86	0.040764
B-QLA	7507.093346	0.172339	0.000269	B	21	Low Intensity Resid*	65	0.017485
B-QLA	9685.631063	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLA	200903.0915	4.6121	0.007206	B	21	Low Intensity Resid*	65	0.46839
B-QLA	11614.45566	0.266631	0.000416	B	21	Low Intensity Resid*	65	0.02704
B-QLA	9685.630758	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLA	19991.99463	0.458953	0.000717	B	82	Row Crops	86	0.061662
B-QLA	9685.61214	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLA	56202.70648	1.290236	0.002015	B	52	Desert Shrub	68	0.13702

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B-QLA	9685.630455	0.222351	0.000347 B		21 Low Intensity Resid*	65	0.022555
B-QLA	207424.8721	4.761819	0.00744 B		21 Low Intensity Resid*	65	0.4836
B-QLA	13751.45692	0.31569	0.000493 B		21 Low Intensity Resid*	65	0.032045
B-QLA	51539.14304	1.183175	0.001848 B		71 Grassland	61	0.112728
B-QLA	44810.22592	1.028701	0.001607 B		21 Low Intensity Resid*	65	0.104455
B-QLA	38742.48223	0.889405	0.001389 B		21 Low Intensity Resid*	65	0.090285
B-QLA	7993.06472	0.183495	0.000286 B		71 Grassland	61	0.017446
B-QLA	9685.629216	0.222351	0.000347 B		21 Low Intensity Resid*	65	0.022555
B-QLA	9685.628916	0.222351	0.000347 B		21 Low Intensity Resid*	65	0.022555
B-QLA	9685.628616	0.222351	0.000347 B		21 Low Intensity Resid*	65	0.022555
B-QLA	29056.86215	0.667053	0.001042 B		21 Low Intensity Resid*	65	0.06773
B-QLA	58297.88482	1.338335	0.002091 B		71 Grassland	61	0.127551
B-QLA	29905.79571	0.686542	0.001072 B		21 Low Intensity Resid*	65	0.06968
B-QLA	22438.68688	0.515121	0.000804 B		71 Grassland	61	0.049044
B-QLA	61076.92288	1.402133	0.00219 B		71 Grassland	61	0.13359
B-QLA	286.538184	0.006578	0.00001 B		71 Grassland	61	0.00061
B-QLA	9685.627688	0.222351	0.000347 B		21 Low Intensity Resid*	65	0.022555
B-QLA	38742.48351	0.889405	0.001389 B		21 Low Intensity Resid*	65	0.090285
B-QLA	141352.1122	3.244997	0.00507 B		71 Grassland	61	0.30927
B-QLA	19371.25475	0.444702	0.000694 B		21 Low Intensity Resid*	65	0.04511
B-QLA	1202764.561	27.611674	0.043143 B		52 Desert Shrub	68	2.933724
B-QLA	87170.61152	2.001161	0.003126 B		21 Low Intensity Resid*	65	0.20319
B-QLA	7260497.559	166.678089	0.260434 B		52 Desert Shrub	68	17.709512
B-QLA	87170.56915	2.00116	0.003126 B		21 Low Intensity Resid*	65	0.20319
B-QLA	68600.62826	1.574853	0.00246 B		71 Grassland	61	0.15006
B-QLA	87170.66641	2.001163	0.003126 B		21 Low Intensity Resid*	65	0.20319
B-QLA	199125.9522	4.571302	0.007142 B		21 Low Intensity Resid*	65	0.46423
B-QLA	8442641.513	193.81638	0.302838 B		52 Desert Shrub	68	20.592984
B-QLA	29056.86451	0.667053	0.001042 B		21 Low Intensity Resid*	65	0.06773
B-QLA	167847.0391	3.853237	0.00602 B		21 Low Intensity Resid*	65	0.3913
B-QLA	38742.48666	0.889405	0.001389 B		21 Low Intensity Resid*	65	0.090285
B-QLA	349621.1563	8.026197	0.01254 B		52 Desert Shrub	68	0.85272
B-QLA	515757.6918	11.840167	0.0185 B		52 Desert Shrub	68	1.258
B-QLA	30662.9218	0.703923	0.001099 B		71 Grassland	61	0.067039
B-QLA	38742.48725	0.889405	0.001389 B		21 Low Intensity Resid*	65	0.090285
B-QLA	570065.875	13.086911	0.020448 B		71 Grassland	61	1.247328
B-QLA	50603.09674	1.161687	0.001815 B		21 Low Intensity Resid*	65	0.117975
B-QLA	9685.622205	0.222351	0.000347 B		71 Grassland	61	0.021167
B-QLA	29056.86406	0.667053	0.001042 B		21 Low Intensity Resid*	65	0.06773
B-QLA	16636.36732	0.381918	0.000596 B		21 Low Intensity Resid*	65	0.03874
B-QLA	6202.488323	0.142389	0.000222 B		71 Grassland	61	0.013542
B-QLA	6631.661693	0.152242	0.000237 B		71 Grassland	61	0.014457
B-QLA	117537.3922	2.698287	0.004216 B		71 Grassland	61	0.257176
B-QLA	71490.47169	1.641195	0.002564 B		21 Low Intensity Resid*	65	0.16666
B-QLA	116189.0458	2.667333	0.004167 B		52 Desert Shrub	68	0.283356
B-QLA	103077.6326	2.366336	0.003697 B		21 Low Intensity Resid*	65	0.240305
B-QLA	9685.622064	0.222351	0.000347 B		71 Grassland	61	0.021167
B-QLA	19371.24665	0.444702	0.000694 B		21 Low Intensity Resid*	65	0.04511
B-QLA	2112476.758	48.495793	0.075774 B		52 Desert Shrub	68	5.152632
B-QLA	208989.7705	4.797744	0.007496 B		71 Grassland	61	0.457256
B-QLA	9685.624101	0.222351	0.000347 B		71 Grassland	61	0.021167
B-QLA	64507.75964	1.480894	0.002313 B		52 Desert Shrub	68	0.157284
B-QLA	38742.49099	0.889405	0.001389 B		21 Low Intensity Resid*	65	0.090285
B-QLA	817669.7543	18.771114	0.029329 B		71 Grassland	61	1.789069
B-QLA	19371.23348	0.444702	0.000694 B		71 Grassland	61	0.042334
B-QLA	9685.623489	0.222351	0.000347 B		52 Desert Shrub	68	0.023596
B-QLA	63434.20691	1.456249	0.002275 B		71 Grassland	61	0.138775
B-QLA	60348.87232	1.385419	0.002164 B		71 Grassland	61	0.132004
B-QLA	38742.49653	0.889405	0.001389 B		52 Desert Shrub	68	0.094452
B-QLA	108415.2694	2.488872	0.003888 B		71 Grassland	61	0.237168
B-QLA	37088.93201	0.851444	0.00133 B		71 Grassland	61	0.08113
B-QLA	214248.8722	4.918477	0.007685 B		71 Grassland	61	0.468785
B-QLA	19371.25213	0.444702	0.000694 B		52 Desert Shrub	68	0.047192

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B-QLA	123884.2232	2.84399	0.004443 B		21	Low Intensity Resid*	65	0.288795
B-QLA	6202.485363	0.142389	0.000222 B		71	Grassland	61	0.013542
B-QLA	9685.619774	0.222351	0.000347 B		52	Desert Shrub	68	0.023596
B-QLA	48428.09453	1.111756	0.001737 B		71	Grassland	61	0.105957
B-QLA	103558.2991	2.377371	0.003714 B		52	Desert Shrub	68	0.252552
B-QLA	85718.64974	1.967829	0.003074 B		71	Grassland	61	0.187514
B-QLA	9685.622329	0.222351	0.000347 B		71	Grassland	61	0.021167
B-QLA	12851.15537	0.295021	0.00046 B		71	Grassland	61	0.02806
B-QLA	16173.61925	0.371295	0.00058 B		21	Low Intensity Resid*	65	0.0377
B-QLA	50995.64375	1.170698	0.001829 B		31	Bare Rock/Sand/Clay	86	0.157294
B-QLA	257747.7568	5.917074	0.009245 B		71	Grassland	61	0.563945
B-QLA	38742.49579	0.889405	0.001389 B		21	Low Intensity Resid*	65	0.090285
B-QLA	29056.87594	0.667054	0.001042 B		71	Grassland	61	0.063562
B-QLA	71152.88818	1.633445	0.002552 B		52	Desert Shrub	68	0.173536
B-QLA	6202.486745	0.142389	0.000222 B		52	Desert Shrub	68	0.015096
B-QLA	6202.487211	0.142389	0.000222 B		71	Grassland	61	0.013542
B-QLA	256116.4319	5.879624	0.009186 B		71	Grassland	61	0.560346
B-QLA	38706.27008	0.888573	0.001388 B		71	Grassland	61	0.084668
B-QLA	9685.625551	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-QLA	9685.625286	0.222351	0.000347 B		71	Grassland	61	0.021167
B-QLA	38742.48581	0.889405	0.001389 B		21	Low Intensity Resid*	65	0.090285
B-QLA	96262.82547	2.20989	0.003452 B		71	Grassland	61	0.210572
B-QLA	6631.660806	0.152241	0.000237 B		71	Grassland	61	0.014457
B-QLA	19463.66903	0.446824	0.000698 B		52	Desert Shrub	68	0.047464
B-QLA	4122.908024	0.094648	0.000147 B		21	Low Intensity Resid*	65	0.009555
B-QLA	921609.1812	21.157235	0.033058 B		52	Desert Shrub	68	2.247944
B-QLA	96856.26349	2.223513	0.003474 B		71	Grassland	61	0.211914
B-QLA	49152.79627	1.128392	0.001763 B		71	Grassland	61	0.107543
B-QLA	38742.49138	0.889405	0.001389 B		21	Low Intensity Resid*	65	0.090285
B-QLA	231432.6227	5.312961	0.008301 B		52	Desert Shrub	68	0.564468
B-QLA	57025.791	1.309132	0.002045 B		82	Row Crops	86	0.17587
B-QLA	68182.25678	1.565249	0.002445 B		52	Desert Shrub	68	0.166626
B-QLA	22599.3145	0.518808	0.00081 B		71	Grassland	61	0.04941
B-QLA	3377.712685	0.077541	0.000121 B		21	Low Intensity Resid*	65	0.007865
B-QLA	13199515.1	303.019171	0.473467 B		52	Desert Shrub	68	32.195756
B-QLA	15329.94805	0.351927	0.000549 B		52	Desert Shrub	68	0.037332
B-QLA	1688560.645	38.764018	0.060568 B		21	Low Intensity Resid*	65	3.93692
B-QLA	899451.8569	20.648573	0.032263 B		52	Desert Shrub	68	2.193884
B-QLA	13072.81321	0.30011	0.000468 A		21	Low Intensity Resid*	46	0.021528
B-QLA	543844.8147	12.484959	0.019507 A		52	Desert Shrub	49	0.955843
B-QLA	289522.3865	6.646519	0.010385 A		21	Low Intensity Resid*	46	0.47771
B-QLA	384879.7919	8.835624	0.013805 A		52	Desert Shrub	49	0.676445
B-QLA	196079.122	4.501357	0.007033 D		52	Desert Shrub	84	0.590772
B-QLA	18750.28079	0.430447	0.000672 D		71	Grassland	80	0.05376
B-QLA	106329.4215	2.440987	0.003814 D		21	Low Intensity Resid*	82	0.312748
B-QLA	343117.4257	7.876892	0.012307 D		52	Desert Shrub	84	1.033788
B-QLA	856.021182	0.019651	0.00003 D		21	Low Intensity Resid*	82	0.00246
B-QLA	658584.3124	15.119015	0.023623 D		52	Desert Shrub	84	1.984332
B-QLA	265574.0894	6.096742	0.009526 D		21	Low Intensity Resid*	82	0.781132
B-QLA	359555.295	8.254253	0.012897 D		52	Desert Shrub	84	1.083348
B-QLA	147.768994	0.003392	0.000005 B		21	Low Intensity Resid*	65	0.000325
B-QLA	317.419973	0.007286	0.000011 B		52	Desert Shrub	68	0.000748
Sum =		4.698342204			Sum =		322.5794213	
CN(II) =		68.66			CN(III) =		83.44	
B-PPA	30307.00197	0.695753	0.001087 B		21	Low Intensity Resid*	65	0.070655
B-PPA	26129.12042	0.599842	0.000937 B		21	Low Intensity Resid*	65	0.060905
B-PPA	56954.31476	1.307491	0.002042 B		21	Low Intensity Resid*	65	0.13273
B-PPA	125912.6631	2.890557	0.004516 B		21	Low Intensity Resid*	65	0.29354
B-PPA	26128.17624	0.59982	0.000937 B		21	Low Intensity Resid*	65	0.060905
B-PPA	10273.22933	0.23584	0.000368 B		22	High Intensity Resi*	70	0.02576

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B-PPA	6202.461892	0.142388	0.000222 B		22	High Intensity Resi*	70	0.01554
B-PPA	6631.636743	0.152241	0.000237 B		22	High Intensity Resi*	70	0.01659
B-PPA	12522.22252	0.28747	0.000449 B		22	High Intensity Resi*	70	0.03143
B-PPA	6094.809312	0.139917	0.000218 B		22	High Intensity Resi*	70	0.01526
B-PPA	40692.44631	0.93417	0.001459 B		21	Low Intensity Resid*	65	0.094835
B-PPA	239.968798	0.005508	0.000008 B		52	Desert Shrub	68	0.000544
B-PPA	17558400.6	403.085413	0.62982 B		52	Desert Shrub	68	42.82776
	Sum =		0.6423			Sum =		43.646454
	CN(II) =		67.95			CN(III) =		82.98
B-AMB	15751.54167	0.361605	0.000565 B		22	High Intensity Resi*	70	0.03955
B-AMB	96608.60056	2.217828	0.003465 B		21	Low Intensity Resid*	65	0.225225
B-AMB	91323.84193	2.096506	0.003275 B		21	Low Intensity Resid*	65	0.212875
B-AMB	58044.5849	1.33252	0.002082 B		22	High Intensity Resi*	70	0.14574
B-AMB	6631.636706	0.152241	0.000237 B		22	High Intensity Resi*	70	0.01659
B-AMB	32113.1125	0.737215	0.001151 B		22	High Intensity Resi*	70	0.08057
B-AMB	83570.69957	1.918519	0.002997 B		21	Low Intensity Resid*	65	0.194805
B-AMB	36792.1589	0.844631	0.001319 B		21	Low Intensity Resid*	65	0.085735
B-AMB	43357.03074	0.99534	0.001555 B		21	Low Intensity Resid*	65	0.101075
B-AMB	43975.89383	1.009547	0.001577 B		22	High Intensity Resi*	70	0.11039
B-AMB	87170.2435	2.001153	0.003126 B		21	Low Intensity Resid*	65	0.20319
B-AMB	87170.26958	2.001154	0.003126 B		21	Low Intensity Resid*	65	0.20319
B-AMB	2923792.355	67.121036	0.104876 B		52	Desert Shrub	68	7.131568
B-AMB	54001.74355	1.239709	0.001937 B		21	Low Intensity Resid*	65	0.125905
B-AMB	22831.15348	0.524131	0.000818 B		21	Low Intensity Resid*	65	0.05317
B-AMB	1241464.136	28.500094	0.044531 B		52	Desert Shrub	68	3.028108
B-AMB	238589.7942	5.477268	0.008558 B		21	Low Intensity Resid*	65	0.55627
B-AMB	26275.19817	0.603195	0.000942 B		52	Desert Shrub	68	0.064056
B-AMB	12774.07918	0.293252	0.000458 B		52	Desert Shrub	68	0.031144
B-AMB	2499805.072	57.387627	0.089668 B		52	Desert Shrub	68	6.097424
B-AMB	75442.74409	1.731927	0.002706 B		21	Low Intensity Resid*	65	0.17589
B-AMB	1628132.509	37.376779	0.058401 B		52	Desert Shrub	68	3.971268
B-AMB	127614.1202	2.929617	0.004577 B		21	Low Intensity Resid*	65	0.297505
B-AMB	16802574.33	385.734029	0.602709 B		52	Desert Shrub	68	40.984212
	Sum =		0.944656			Sum =		64.135455
	CN(II) =		67.89			CN(III) =		82.95
B-AMC	21480.44419	0.493123	0.00077 B		21	Low Intensity Resid*	65	0.05005
B-AMC	97866.25858	2.2467	0.00351 B		52	Desert Shrub	68	0.23868
B-AMC	108138.7838	2.482524	0.003878 B		52	Desert Shrub	68	0.263704
B-AMC	155811.2854	3.576934	0.005588 B		21	Low Intensity Resid*	65	0.36322
B-AMC	51773.88105	1.188564	0.001857 B		21	Low Intensity Resid*	65	0.120705
B-AMC	15637.15205	0.358979	0.00056 B		52	Desert Shrub	68	0.03808
B-AMC	9685.590068	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-AMC	1056533.643	24.254674	0.037897 B		52	Desert Shrub	68	2.576996
B-AMC	2942.351838	0.067547	0.000105 B		21	Low Intensity Resid*	65	0.006825
B-AMC	163540.1652	3.754365	0.005866 B		52	Desert Shrub	68	0.398888
B-AMC	8397.629073	0.192783	0.000301 B		21	Low Intensity Resid*	65	0.019565
B-AMC	483.694235	0.011104	0.000017 B		21	Low Intensity Resid*	65	0.001105
B-AMC	29905.69146	0.68654	0.001072 B		21	Low Intensity Resid*	65	0.06968
B-AMC	29905.69255	0.68654	0.001072 B		21	Low Intensity Resid*	65	0.06968
B-AMC	9685.595009	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-AMC	19371.19037	0.444701	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-AMC	9685.595363	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-AMC	19371.19108	0.444701	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-AMC	29905.69583	0.68654	0.001072 B		21	Low Intensity Resid*	65	0.06968
B-AMC	25727.36373	0.590619	0.000922 B		21	Low Intensity Resid*	65	0.05993
B-AMC	40084.32511	0.920209	0.001437 B		21	Low Intensity Resid*	65	0.093405
B-AMC	29905.69987	0.68654	0.001072 B		21	Low Intensity Resid*	65	0.06968

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-AMC	19371.19475	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMC	9685.597557	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMC	19371.19548	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMC	9685.597918	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMC	9685.598113	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMC	72.0872	0.001654	0.000002	B	21	Low Intensity Resid*	65	0.00013
B-AMC	6631.642721	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-AMC	161239.0651	3.701539	0.005783	B	71	Grassland	61	0.352763
B-AMC	87170.34664	2.001155	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-AMC	131224.4545	3.012498	0.004707	B	71	Grassland	61	0.287127
B-AMC	77484.7527	1.778805	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-AMC	19371.17696	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMC	138303.3603	3.175008	0.00496	B	21	Low Intensity Resid*	65	0.3224
B-AMC	383478.2005	8.803448	0.013755	B	21	Low Intensity Resid*	65	0.894075
B-AMC	78811.04599	1.809252	0.002826	B	52	Desert Shrub	68	0.192168
B-AMC	65689.89364	1.508032	0.002356	B	21	Low Intensity Resid*	65	0.15314
B-AMC	260885.1774	5.989099	0.009357	B	52	Desert Shrub	68	0.636276
B-AMC	167344.394	3.841698	0.006002	B	21	Low Intensity Resid*	65	0.39013
B-AMC	6631.639783	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-AMC	2884694.236	66.223467	0.103474	B	52	Desert Shrub	68	7.036232
B-AMC	231419.8477	5.312668	0.008301	B	52	Desert Shrub	68	0.564468
B-AMC	98676.44466	2.265299	0.003539	B	21	Low Intensity Resid*	65	0.230035
B-AMC	219308.5536	5.034631	0.007866	B	21	Low Intensity Resid*	65	0.51129
B-AMC	6339.655309	0.145538	0.000227	B	21	Low Intensity Resid*	65	0.014755
B-AMC	905632.1563	20.790453	0.032485	B	52	Desert Shrub	68	2.20898
B-AMC	6724.556232	0.154374	0.000241	B	52	Desert Shrub	68	0.016388
B-AMC	193068.0566	4.432232	0.006925	B	52	Desert Shrub	68	0.4709
B-AMC	56683.31795	1.301269	0.002033	B	21	Low Intensity Resid*	65	0.132145
B-AMC	23130196.02	530.996235	0.829681	B	52	Desert Shrub	68	56.418308
Sum =		1.123447			Sum =		76.117098	
CN(II) =		67.75			CN(III) =		82.85	

B-P1C	4515.954288	0.103672	0.000161	B	21	Low Intensity Resid*	65	0.010465
B-P1C	9685.663725	0.222352	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P1C	44803.28469	1.028541	0.001607	B	21	Low Intensity Resid*	65	0.104455
B-P1C	29905.89914	0.686544	0.001072	B	21	Low Intensity Resid*	65	0.06968
B-P1C	19371.3216	0.444704	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-P1C	853704.3625	19.598355	0.030622	B	52	Desert Shrub	68	2.082296
B-P1C	6631.688164	0.152242	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-P1C	188522.1316	4.327872	0.006762	B	21	Low Intensity Resid*	65	0.43953
B-P1C	9198022.821	211.157548	0.329933	B	52	Desert Shrub	68	22.435444
B-P1C	1160.808481	0.026648	0.000041	B	21	Low Intensity Resid*	65	0.002665
B-P1C	54896.48798	1.260249	0.001969	B	52	Desert Shrub	68	0.133892
B-P1C	80352.6473	1.844642	0.002882	B	21	Low Intensity Resid*	65	0.18733
B-P1C	189898.5687	4.359471	0.006811	B	52	Desert Shrub	68	0.463148
B-P1C	5335320.402	122.482102	0.191378	A	52	Desert Shrub	49	9.377522
B-P1C	1069203.606	24.545537	0.038352	D	52	Desert Shrub	84	3.221568
Sum =		0.612868			Sum =		38.611065	
CN(II) =		63.00			CN(III) =		79.66	

B-AMA	121505.868	2.78939	0.004358	B	52	Desert Shrub	68	0.296344
B-AMA	6813.770305	0.156422	0.000244	B	52	Desert Shrub	68	0.016592
B-AMA	262559.5003	6.027536	0.009418	B	21	Low Intensity Resid*	65	0.61217
B-AMA	77484.72212	1.778804	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-AMA	578278.5238	13.275448	0.020742	B	52	Desert Shrub	68	1.410456
B-AMA	1311.368322	0.030104	0.000047	B	52	Desert Shrub	68	0.003196
B-AMA	9685.586493	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMA	19371.17647	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMA	9685.588397	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555

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B-AMA	29905.66607	0.686539	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-AMA	374467.6596	8.596594	0.013432	B	21 Low Intensity Resid*	65	0.87308
B-AMA	9685.585834	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	29905.67375	0.686539	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-AMA	9685.585622	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	2230357.995	51.201974	0.080003	B	52 Desert Shrub	68	5.440204
B-AMA	9685.58541	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	236872.4798	5.437843	0.008496	B	52 Desert Shrub	68	0.577728
B-AMA	48427.95142	1.111752	0.001737	B	22 High Intensity Resi*	70	0.12159
B-AMA	19371.17426	0.4447	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-AMA	9685.585201	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	58113.51802	1.334102	0.002084	B	23 Commercial	92	0.191728
B-AMA	751332.8581	17.248229	0.02695	B	52 Desert Shrub	68	1.8326
B-AMA	24472.62611	0.561814	0.000877	B	21 Low Intensity Resid*	65	0.057005
B-AMA	39623.18703	0.909623	0.001421	B	22 High Intensity Resi*	70	0.09947
B-AMA	993453.1513	22.806546	0.035635	B	52 Desert Shrub	68	2.42318
B-AMA	25498.78347	0.585371	0.000914	B	21 Low Intensity Resid*	65	0.05941
B-AMA	217426.9579	4.991436	0.007799	B	21 Low Intensity Resid*	65	0.506935
B-AMA	9685.584135	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	45900.79185	1.053737	0.001646	B	21 Low Intensity Resid*	65	0.10699
B-AMA	29905.67683	0.686539	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-AMA	9685.583927	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	6.495199	0.000149	2.33E-07	B	21 Low Intensity Resid*	65	1.51439E-05
B-AMA	302188.2382	6.937287	0.010839	B	52 Desert Shrub	68	0.737052
B-AMA	394245.9758	9.050642	0.014141	B	21 Low Intensity Resid*	65	0.919165
B-AMA	407078.5623	9.345237	0.014601	B	52 Desert Shrub	68	0.992868
B-AMA	338332.3327	7.767041	0.012136	B	52 Desert Shrub	68	0.825248
B-AMA	781576.1682	17.942519	0.028035	B	52 Desert Shrub	68	1.90638
B-AMA	28255.41479	0.648655	0.001013	B	21 Low Intensity Resid*	65	0.065845
B-AMA	24303.28609	0.557926	0.000871	B	21 Low Intensity Resid*	65	0.056615
B-AMA	19371.16011	0.4447	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-AMA	45890.77087	1.053507	0.001646	B	21 Low Intensity Resid*	65	0.10699
B-AMA	87170.25543	2.001153	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-AMA	2394418.398	54.968282	0.085887	B	52 Desert Shrub	68	5.840316
B-AMA	1436062.015	32.967447	0.051511	B	52 Desert Shrub	68	3.502748
B-AMA	6631.63367	0.152241	0.000237	B	52 Desert Shrub	68	0.016116
B-AMA	311783.1126	7.157555	0.011183	B	52 Desert Shrub	68	0.760444
B-AMA	677991.0972	15.564533	0.024319	B	52 Desert Shrub	68	1.653692
B-AMA	878576.183	20.169333	0.031514	B	21 Low Intensity Resid*	65	2.04841
B-AMA	34427.08263	0.790337	0.001234	B	71 Grassland	61	0.075274
B-AMA	9685.580682	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-AMA	19371.16079	0.4447	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-AMA	93043.00384	2.135973	0.003337	B	52 Desert Shrub	68	0.226916
B-AMA	6631.637916	0.152241	0.000237	B	21 Low Intensity Resid*	65	0.015405
B-AMA	259354.0484	5.953949	0.009303	B	21 Low Intensity Resid*	65	0.604695
B-AMA	636204.232	14.605239	0.02282	B	52 Desert Shrub	68	1.55176
B-AMA	9685.585024	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-AMA	6202.463449	0.142388	0.000222	B	21 Low Intensity Resid*	65	0.01443
B-AMA	21359.31499	0.490342	0.000766	B	21 Low Intensity Resid*	65	0.04979
B-AMA	1458477.179	33.482028	0.052315	B	52 Desert Shrub	68	3.55742
B-AMA	33236.16252	0.762997	0.001192	B	21 Low Intensity Resid*	65	0.07748
B-AMA	636140.2035	14.603769	0.022818	B	21 Low Intensity Resid*	65	1.48317
B-AMA	86446.44978	1.984537	0.0031	B	21 Low Intensity Resid*	65	0.2015
B-AMA	1271105.632	29.18057	0.045594	B	52 Desert Shrub	68	3.100392
B-AMA	38742.33172	0.889401	0.001389	B	31 Bare Rock/Sand/Clay	86	0.119454
B-AMA	434380.3505	9.972	0.015581	B	52 Desert Shrub	68	1.059508
B-AMA	6631.636249	0.152241	0.000237	B	31 Bare Rock/Sand/Clay	86	0.020382
B-AMA	267616.6852	6.143633	0.009599	B	21 Low Intensity Resid*	65	0.623935
B-AMA	22683.01403	0.52073	0.000813	B	21 Low Intensity Resid*	65	0.052845
B-AMA	649211.2924	14.90384	0.023287	B	52 Desert Shrub	68	1.583516
B-AMA	34433.32447	0.79048	0.001235	B	21 Low Intensity Resid*	65	0.080275
B-AMA	12289.20544	0.282121	0.00044	B	21 Low Intensity Resid*	65	0.0286
B-AMA	96855.85957	2.223504	0.003474	B	21 Low Intensity Resid*	65	0.22581

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-AMA	96855.84043	2.223504	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-AMA	3079083.396	70.686028	0.110446	B	52	Desert Shrub	68	7.510328
B-AMA	483522.0139	11.100138	0.017343	B	52	Desert Shrub	68	1.179324
B-AMA	45305.9417	1.040081	0.001625	B	21	Low Intensity Resid*	65	0.105625
B-AMA	280882.0371	6.448164	0.010075	B	21	Low Intensity Resid*	65	0.654875
B-AMA	6631.637646	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-AMA	6631.638017	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-AMA	136732.2528	3.13894	0.004904	B	21	Low Intensity Resid*	65	0.31876
B-AMA	2841951.292	65.242224	0.10194	B	52	Desert Shrub	68	6.93192
B-AMA	94635.49358	2.172531	0.003394	B	21	Low Intensity Resid*	65	0.22061
B-AMA	513507.2803	11.788505	0.018419	B	52	Desert Shrub	68	1.252492
B-AMA	57482.19058	1.319609	0.002061	B	21	Low Intensity Resid*	65	0.133965
B-AMA	1293369.633	29.691681	0.046393	B	52	Desert Shrub	68	3.154724
B-AMA	45678.11501	1.048625	0.001638	B	52	Desert Shrub	68	0.111384
B-AMA	11489.07582	0.263752	0.000412	B	52	Desert Shrub	68	0.028016
B-AMA	7137.914564	0.163863	0.000256	B	52	Desert Shrub	68	0.017408
B-AMA	87170.26527	2.001153	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-AMA	258367.7962	5.931308	0.009267	B	52	Desert Shrub	68	0.630156
B-AMA	231574.9421	5.316229	0.008306	B	21	Low Intensity Resid*	65	0.53989
B-AMA	68155.71729	1.564639	0.002444	B	21	Low Intensity Resid*	65	0.15886
B-AMA	237561.1471	5.453653	0.008521	B	52	Desert Shrub	68	0.579428
B-AMA	112656.5136	2.586237	0.00404	B	21	Low Intensity Resid*	65	0.2626
B-AMA	62697.61752	1.439339	0.002248	B	21	Low Intensity Resid*	65	0.14612
B-AMA	905508.8548	20.787622	0.03248	B	52	Desert Shrub	68	2.20864
B-AMA	1554936.746	35.696435	0.055775	B	52	Desert Shrub	68	3.7927
	Sum =		1.187157233			Sum =		80.21138114
	CN(II) =		67.57			CN(III) =		82.73

B-MCA	23407.10383	0.537353	0.000839	B	21	Low Intensity Resid*	65	0.054535
B-MCA	66864.23136	1.534991	0.002398	B	21	Low Intensity Resid*	65	0.15587
B-MCA	23294.45187	0.534767	0.000835	B	52	Desert Shrub	68	0.05678
B-MCA	62400.10897	1.432509	0.002238	B	52	Desert Shrub	68	0.152184
B-MCA	58113.57742	1.334104	0.002084	B	21	Low Intensity Resid*	65	0.13546
B-MCA	9685.597606	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-MCA	87170.35164	2.001155	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-MCA	771658.9417	17.714851	0.027679	B	52	Desert Shrub	68	1.882172
B-MCA	106541.5722	2.445857	0.003821	B	22	High Intensity Resi*	70	0.26747
B-MCA	16570.06939	0.380396	0.000594	B	21	Low Intensity Resid*	65	0.03861
B-MCA	182159.0072	4.181795	0.006534	B	21	Low Intensity Resid*	65	0.42471
B-MCA	9685.59732	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-MCA	48767.87274	1.119556	0.001749	B	71	Grassland	61	0.106689
B-MCA	99.680063	0.002288	0.000003	B	22	High Intensity Resi*	70	0.00021
B-MCA	53945.92816	1.238428	0.001935	B	21	Low Intensity Resid*	65	0.125775
B-MCA	20322.62391	0.466543	0.000728	B	21	Low Intensity Resid*	65	0.04732
B-MCA	38742.40861	0.889403	0.001389	B	71	Grassland	61	0.084729
B-MCA	77484.80474	1.778806	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-MCA	1576531.799	36.19219	0.05655	B	52	Desert Shrub	68	3.8454
B-MCA	4339.028195	0.09961	0.000155	B	71	Grassland	61	0.009455
B-MCA	435319.5059	9.99356	0.015614	B	52	Desert Shrub	68	1.061752
B-MCA	132458.1254	3.04082	0.004751	B	21	Low Intensity Resid*	65	0.308815
B-MCA	1417150.319	32.533294	0.050833	B	52	Desert Shrub	68	3.456644
B-MCA	16697.11903	0.383313	0.000598	B	52	Desert Shrub	68	0.040664
B-MCA	262416.7458	6.024259	0.009412	B	21	Low Intensity Resid*	65	0.61178
B-MCA	93744.07019	2.152067	0.003362	B	52	Desert Shrub	68	0.228616
B-MCA	74753.83152	1.716111	0.002681	B	71	Grassland	61	0.163541
B-MCA	19371.19718	0.444701	0.000694	B	22	High Intensity Resi*	70	0.04858
B-MCA	131461.6594	3.017944	0.004715	B	52	Desert Shrub	68	0.32062
B-MCA	210860.4013	4.840688	0.007563	B	21	Low Intensity Resid*	65	0.491595
B-MCA	0.472845	0.00001	1.70E-08	B	52	Desert Shrub	68	1.15335E-06
B-MCA	106541.6386	2.445859	0.003821	B	21	Low Intensity Resid*	65	0.248365
B-MCA	35778.16675	0.821353	0.001283	B	21	Low Intensity Resid*	65	0.083395

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-MCA	20248.4791	0.464841	0.000726	B	22 High Intensity Resi*	70	0.05082
B-MCA	9685.598824	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-MCA	38742.40269	0.889403	0.001389	B	21 Low Intensity Resid*	65	0.090285
B-MCA	1967958.476	45.17811	0.07059	B	52 Desert Shrub	68	4.80012
B-MCA	233603.883	5.362807	0.008379	B	52 Desert Shrub	68	0.569772
B-MCA	6631.643959	0.152241	0.000237	B	22 High Intensity Resi*	70	0.01659
B-MCA	9685.595976	0.22235	0.000347	B	22 High Intensity Resi*	70	0.02429
B-MCA	113277.8014	2.6005	0.004063	B	22 High Intensity Resi*	70	0.28441
B-MCA	9305.792541	0.213631	0.000333	B	21 Low Intensity Resid*	65	0.021645
B-MCA	87170.33796	2.001155	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-MCA	77484.75984	1.778805	0.002779	B	21 Low Intensity Resid*	65	0.180635
B-MCA	1709641.288	39.247963	0.061324	B	52 Desert Shrub	68	4.170032
B-MCA	52382.87089	1.202545	0.001878	B	71 Grassland	61	0.114558
B-MCA	284628.2042	6.534164	0.010209	B	52 Desert Shrub	68	0.694212
B-MCA	6631.647954	0.152241	0.000237	B	71 Grassland	61	0.014457
B-MCA	288405.5083	6.620879	0.010345	B	22 High Intensity Resi*	70	0.72415
B-MCA	90955.37734	2.088048	0.003262	B	71 Grassland	61	0.198982
B-MCA	212793.1285	4.885058	0.007632	B	21 Low Intensity Resid*	65	0.49608
B-MCA	28631.04694	0.657278	0.001026	B	21 Low Intensity Resid*	65	0.06669
B-MCA	115827.6756	2.659037	0.004154	B	71 Grassland	61	0.253394
B-MCA	45209.70831	1.037872	0.001621	B	52 Desert Shrub	68	0.110228
B-MCA	505806.1666	11.611711	0.018143	B	52 Desert Shrub	68	1.233724
B-MCA	1027352.6	23.58477	0.036851	B	52 Desert Shrub	68	2.505868
B-MCA	63092.35393	1.448401	0.002263	B	22 High Intensity Resi*	70	0.15841
B-MCA	312425.6387	7.172305	0.011206	B	21 Low Intensity Resid*	65	0.72839
B-MCA	987467.3017	22.669129	0.03542	B	52 Desert Shrub	68	2.40856
B-MCA	20214.21099	0.464054	0.000725	B	21 Low Intensity Resid*	65	0.047125
B-MCA	186701.8081	4.286083	0.006697	B	21 Low Intensity Resid*	65	0.435305
B-MCA	33913.0895	0.778537	0.001216	B	21 Low Intensity Resid*	65	0.07904
B-MCA	103906.2691	2.385359	0.003727	B	22 High Intensity Resi*	70	0.26089
B-MCA	1373.693998	0.031535	0.000049	B	21 Low Intensity Resid*	65	0.003185
B-MCA	233343.346	5.356826	0.00837	B	52 Desert Shrub	68	0.56916
B-MCA	167572.0974	3.846926	0.00601	B	52 Desert Shrub	68	0.40868
B-MCA	441592.6482	10.137572	0.015839	B	52 Desert Shrub	68	1.077052
B-MCA	29908.86085	0.686612	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-MCA	1206008.118	27.686136	0.043259	B	52 Desert Shrub	68	2.941612
B-MCA	18563.12665	0.42615	0.000665	B	21 Low Intensity Resid*	65	0.043225
B-MCA	2801.124647	0.064304	0.0001	B	21 Low Intensity Resid*	65	0.0065
B-MCA	62954.5339	1.445237	0.002258	B	22 High Intensity Resi*	70	0.15806
B-MCA	4469.094563	0.102596	0.00016	B	52 Desert Shrub	68	0.01088
B-MCA	401855.9784	9.225343	0.014414	B	52 Desert Shrub	68	0.980152
B-MCA	237015.4446	5.441125	0.008501	B	21 Low Intensity Resid*	65	0.552565
B-MCA	82.348903	0.00189	0.000002	B	52 Desert Shrub	68	0.000136
B-MCA	6631.646214	0.152241	0.000237	B	22 High Intensity Resi*	70	0.01659
B-MCA	53170.23867	1.22062	0.001907	B	52 Desert Shrub	68	0.129676
B-MCA	379.803411	0.008719	0.000013	B	21 Low Intensity Resid*	65	0.000845
B-MCA	451567.6668	10.366567	0.016197	B	52 Desert Shrub	68	1.101396
B-MCA	361766.3948	8.305013	0.012976	B	22 High Intensity Resi*	70	0.90832
B-MCA	9685.597289	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-MCA	18574.91656	0.426421	0.000666	B	52 Desert Shrub	68	0.045288
B-MCA	1169029.461	26.837223	0.041933	B	52 Desert Shrub	68	2.851444
B-MCA	70150.6911	1.610438	0.002516	B	21 Low Intensity Resid*	65	0.16354
B-MCA	100263.8724	2.301741	0.003596	B	21 Low Intensity Resid*	65	0.23374
B-MCA	1479846.322	33.972596	0.053082	B	52 Desert Shrub	68	3.609576
B-MCA	108382.0905	2.48811	0.003887	B	52 Desert Shrub	68	0.264316
B-MCA	1081.833341	0.024835	0.000038	B	21 Low Intensity Resid*	65	0.00247
B-MCA	1274.027885	0.029247	0.000045	B	21 Low Intensity Resid*	65	0.002925
B-MCA	148302.4238	3.404555	0.005319	B	52 Desert Shrub	68	0.361692
B-MCA	25727.35414	0.590618	0.000922	B	21 Low Intensity Resid*	65	0.05993
B-MCA	15035.60819	0.34517	0.000539	B	52 Desert Shrub	68	0.036652
B-MCA	290653.3172	6.672482	0.010425	B	21 Low Intensity Resid*	65	0.677625
B-MCA	239693.6564	5.502609	0.008597	B	52 Desert Shrub	68	0.584596
B-MCA	190692.0617	4.377687	0.00684	B	52 Desert Shrub	68	0.46512

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-MCA	19299.10963	0.443046	0.000692 B		21	Low Intensity Resid*	65	0.04498
B-MCA	1912.185613	0.043897	0.000068 B		21	Low Intensity Resid*	65	0.00442
B-MCA	86619.31684	1.988505	0.003107 B		21	Low Intensity Resid*	65	0.201955
B-MCA	19371.19684	0.444701	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-MCA	70633.34197	1.621518	0.002533 B		71	Grassland	61	0.154513
B-MCA	135598.3398	3.112909	0.004863 B		31	Bare Rock/Sand/Clay	86	0.418218
B-MCA	134099.7272	3.078506	0.00481 B		71	Grassland	61	0.29341
B-MCA	145399.1196	3.337904	0.005215 B		52	Desert Shrub	68	0.35462
B-MCA	9668.543785	0.221959	0.000346 B		21	Low Intensity Resid*	65	0.02249
B-MCA	182592.6542	4.19175	0.006549 B		23	Commercial	92	0.602508
B-MCA	78617.42083	1.804807	0.00282 B		52	Desert Shrub	68	0.19176
B-MCA	43218.66104	0.992163	0.00155 B		82	Row Crops	86	0.1333
B-MCA	7301.669363	0.167623	0.000261 B		21	Low Intensity Resid*	65	0.016965
B-MCA	9685.599018	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-MCA	96628.97172	2.218295	0.003466 B		71	Grassland	61	0.211426
B-MCA	102123.2331	2.344426	0.003663 B		82	Row Crops	86	0.315018
B-MCA	9685.599873	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-MCA	9685.599629	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-MCA	19371.19753	0.444701	0.000694 B		52	Desert Shrub	68	0.047192
B-MCA	46369.55982	1.064498	0.001663 B		31	Bare Rock/Sand/Clay	86	0.143018
B-MCA	9685.599384	0.22235	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-MCA	133487.803	3.064458	0.004788 B		82	Row Crops	86	0.411768
B-MCA	108483.0121	2.490427	0.003891 B		82	Row Crops	86	0.334626
B-MCA	151412.0972	3.475943	0.005431 B		22	High Intensity Resi*	70	0.38017
B-MCA	64653.87827	1.484248	0.002319 B		52	Desert Shrub	68	0.157692
B-MCA	19371.19763	0.444701	0.000694 B		21	Low Intensity Resid*	65	0.04511
B-MCA	29056.79677	0.667052	0.001042 B		52	Desert Shrub	68	0.070856
B-MCA	9685.59868	0.22235	0.000347 B		22	High Intensity Resi*	70	0.02429
B-MCA	48427.99102	1.111753	0.001737 B		21	Low Intensity Resid*	65	0.112905
B-MCA	169633.9138	3.894258	0.006084 B		71	Grassland	61	0.371124
B-MCA	126896.1913	2.913135	0.004551 B		21	Low Intensity Resid*	65	0.295815
B-MCA	251153.8202	5.765698	0.009008 B		52	Desert Shrub	68	0.612544
B-MCA	6202.473423	0.142389	0.000222 B		52	Desert Shrub	68	0.015096
B-MCA	48427.99755	1.111753	0.001737 B		21	Low Intensity Resid*	65	0.112905
B-MCA	290266.4773	6.663601	0.010411 B		22	High Intensity Resi*	70	0.72877
B-MCA	284629.9275	6.534204	0.010209 B		21	Low Intensity Resid*	65	0.663585
B-MCA	6980.544937	0.160251	0.00025 B		21	Low Intensity Resid*	65	0.01625
B-MCA	158694.4611	3.643123	0.005692 B		22	High Intensity Resi*	70	0.39844
B-MCA	87170.38816	2.001156	0.003126 B		21	Low Intensity Resid*	65	0.20319
B-MCA	63763.31294	1.463804	0.002287 B		21	Low Intensity Resid*	65	0.148655
B-MCA	10620.56823	0.243814	0.00038 B		21	Low Intensity Resid*	65	0.0247
B-MCA	2253678.183	51.737332	0.080839 B		52	Desert Shrub	68	5.497052
B-MCA	464001.6744	10.652012	0.016643 B		52	Desert Shrub	68	1.131724
B-MCA	1195749.187	27.450624	0.042891 B		52	Desert Shrub	68	2.916588
B-MCA	40800.63546	0.936653	0.001463 B		21	Low Intensity Resid*	65	0.095095
B-MCA	1639.253843	0.037632	0.000058 B		21	Low Intensity Resid*	65	0.00377
B-MCA	5533.055664	0.127021	0.000198 B		52	Desert Shrub	68	0.013464
B-MCA	1787388.374	41.03279	0.064113 B		52	Desert Shrub	68	4.359684
Sum =		1.127283017		Sum =			76.64333515	
CN(II) =		67.99		CN(III) =			83.01	

B-P1B	65080048.73	1494.03234	2.334425 B		52	Desert Shrub	68	158.7409
B-P1B	1036128.498	23.786237	0.037165 B		21	Low Intensity Resid*	65	2.415725
B-P1B	49344940.76	1132.803966	1.770006 B		52	Desert Shrub	68	120.360408
B-P1B	305219.6412	7.006878	0.010948 B		21	Low Intensity Resid*	65	0.71162
B-P1B	3557561.721	81.670379	0.127609 B		52	Desert Shrub	68	8.677412
Sum =		4.280153		Sum =			290.906065	
CN(II) =		67.97		CN(III) =			82.99	

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-SHB	38123.05073	0.875184	0.001367	B	21 Low Intensity Resid*	65	0.088855
B-SHB	9685.64737	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-SHB	29898.76277	0.686381	0.001072	B	21 Low Intensity Resid*	65	0.06968
B-SHB	9685.64847	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-SHB	19371.29778	0.444703	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-SHB	9685.649309	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-SHB	106542.1435	2.445871	0.003821	B	21 Low Intensity Resid*	65	0.248365
B-SHB	22380.11711	0.513776	0.000802	B	21 Low Intensity Resid*	65	0.05213
B-SHB	18969.85104	0.435487	0.00068	B	21 Low Intensity Resid*	65	0.0442
B-SHB	8906454.738	204.464066	0.319475	B	52 Desert Shrub	68	21.7243
B-SHB	2543642.964	58.394007	0.09124	A	52 Desert Shrub	49	4.47076
B-SHB	3901340.878	89.562462	0.139941	D	52 Desert Shrub	84	11.755044
	Sum =		0.560133		Sum =		38.566109
	CN(II) =		68.85		CN(III) =		83.56

B-P6A	9679.094705	0.222201	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6A	19371.18014	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P6A	379510.2912	8.712357	0.013613	B	52 Desert Shrub	68	0.925684
B-P6A	177369.1787	4.071836	0.006362	B	52 Desert Shrub	68	0.432616
B-P6A	208996.7203	4.797904	0.007496	B	21 Low Intensity Resid*	65	0.48724
B-P6A	19371.18149	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P6A	16840.94863	0.386614	0.000604	B	22 High Intensity Resi*	70	0.04228
B-P6A	17997.50014	0.413165	0.000645	B	21 Low Intensity Resid*	65	0.041925
B-P6A	9685.590916	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6A	37078.31198	0.8512	0.00133	B	71 Grassland	61	0.08113
B-P6A	19371.18217	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P6A	9685.591254	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6A	238367.3763	5.472161	0.00855	B	52 Desert Shrub	68	0.5814
B-P6A	32428.76938	0.744462	0.001163	B	22 High Intensity Resi*	70	0.08141
B-P6A	9685.597729	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-P6A	35450.7968	0.813838	0.001271	B	71 Grassland	61	0.077531
B-P6A	19371.19438	0.444701	0.000694	B	22 High Intensity Resi*	70	0.04858
B-P6A	19371.18285	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P6A	8131.436048	0.186672	0.000291	B	21 Low Intensity Resid*	65	0.018915
B-P6A	53830.56365	1.235779	0.00193	B	52 Desert Shrub	68	0.13124
B-P6A	9685.591596	0.22235	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6A	157364.7279	3.612597	0.005644	B	21 Low Intensity Resid*	65	0.36686
B-P6A	375002.1923	8.608865	0.013451	B	52 Desert Shrub	68	0.914668
B-P6A	71628.04838	1.644353	0.002569	B	21 Low Intensity Resid*	65	0.166985
B-P6A	87170.30926	2.001154	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-P6A	1762766.343	40.467546	0.06323	B	52 Desert Shrub	68	4.29964
B-P6A	6631.641537	0.152241	0.000237	B	21 Low Intensity Resid*	65	0.015405
B-P6A	242479.8877	5.566572	0.008697	B	21 Low Intensity Resid*	65	0.565305
B-P6A	311694.924	7.15553	0.01118	B	52 Desert Shrub	68	0.76024
B-P6A	93946.70411	2.156719	0.003369	B	21 Low Intensity Resid*	65	0.218985
B-P6A	9685.598579	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-P6A	9685.598121	0.22235	0.000347	B	22 High Intensity Resi*	70	0.02429
B-P6A	6631.64495	0.152241	0.000237	B	23 Commercial	92	0.021804
B-P6A	113257.1657	2.600026	0.004062	B	71 Grassland	61	0.247782
B-P6A	19371.19661	0.444701	0.000694	B	22 High Intensity Resi*	70	0.04858
B-P6A	66134.47538	1.518238	0.002372	B	23 Commercial	92	0.218224
B-P6A	515590.3992	11.836326	0.018494	B	52 Desert Shrub	68	1.257592
B-P6A	212238.6933	4.872329	0.007613	B	52 Desert Shrub	68	0.517684
B-P6A	40407.10218	0.927619	0.001449	B	22 High Intensity Resi*	70	0.10143
B-P6A	19371.19483	0.444701	0.000694	B	23 Commercial	92	0.063848
B-P6A	19371.19541	0.444701	0.000694	B	21 Low Intensity Resid*	65	0.04511
B-P6A	246417.4174	5.656965	0.008839	B	22 High Intensity Resi*	70	0.61873
B-P6A	5116.489637	0.117458	0.000183	B	21 Low Intensity Resid*	65	0.011895
B-P6A	125520.6569	2.881557	0.004502	B	21 Low Intensity Resid*	65	0.29263
B-P6A	7638.113817	0.175346	0.000273	B	21 Low Intensity Resid*	65	0.017745
B-P6A	42979.53077	0.986674	0.001541	B	21 Low Intensity Resid*	65	0.100165

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-P6A	73394.04395	1.684895	0.002632	B	21 Low Intensity Resid*	65	0.17108
B-P6A	1660592.085	38.121948	0.059565	B	52 Desert Shrub	68	4.05042
B-P6A	96855.98696	2.223507	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-P6A	50603.63725	1.161699	0.001815	B	21 Low Intensity Resid*	65	0.117975
B-P6A	87170.38821	2.001156	0.003126	B	21 Low Intensity Resid*	65	0.20319
B-P6A	55866.17622	1.28251	0.002003	B	21 Low Intensity Resid*	65	0.130195
B-P6A	903737.1908	20.746951	0.032417	B	52 Desert Shrub	68	2.204356
B-P6A	833047.6679	19.124142	0.029881	B	52 Desert Shrub	68	2.031908
B-P6A	74130.32613	1.701798	0.002659	B	21 Low Intensity Resid*	65	0.172835
B-P6A	96855.90734	2.223505	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-P6A	5596469.159	128.477253	0.200745	B	52 Desert Shrub	68	13.65066
B-P6A	143267.3008	3.288964	0.005139	B	21 Low Intensity Resid*	65	0.334035
B-P6A	475238.8854	10.909983	0.017046	B	52 Desert Shrub	68	1.159128
B-P6A	48368.1314	1.110379	0.001734	B	21 Low Intensity Resid*	65	0.11271
B-P6A	369678.675	8.486654	0.01326	B	21 Low Intensity Resid*	65	0.8619
B-P6A	46.766346	0.001073	0.000001	B	82 Row Crops	86	0.000086
B-P6A	81300.74715	1.866408	0.002916	B	21 Low Intensity Resid*	65	0.18954
B-P6A	97761.93286	2.244305	0.003506	B	21 Low Intensity Resid*	65	0.22789
B-P6A	483390.2237	11.097112	0.017339	B	52 Desert Shrub	68	1.179052
B-P6A	118984.0914	2.731498	0.004267	B	21 Low Intensity Resid*	65	0.277355
B-P6A	521887.0725	11.980878	0.01872	B	52 Desert Shrub	68	1.27296
B-P6A	31342.45362	0.719523	0.001124	B	21 Low Intensity Resid*	65	0.07306
B-P6A	96855.93639	2.223506	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-P6A	96855.91558	2.223505	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-P6A	96855.89522	2.223505	0.003474	B	21 Low Intensity Resid*	65	0.22581
B-P6A	7557540.545	173.497257	0.271089	B	52 Desert Shrub	68	18.434052
B-P6A	174340.8305	4.002314	0.006253	B	21 Low Intensity Resid*	65	0.406445
B-P6A	1020053.454	23.417205	0.036589	B	52 Desert Shrub	68	2.488052
B-P6A	113983.3041	2.616696	0.004088	B	21 Low Intensity Resid*	65	0.26572
B-P6A	1625.435216	0.037314	0.000058	B	52 Desert Shrub	68	0.003944
B-P6A	6202.470838	0.142389	0.000222	B	71 Grassland	61	0.013542
B-P6A	380.117527	0.008726	0.000013	B	71 Grassland	61	0.000793
B-P6A	6202.467806	0.142389	0.000222	B	31 Bare Rock/Sand/Clay	86	0.019092
B-P6A	9685.594558	0.22235	0.000347	B	31 Bare Rock/Sand/Clay	86	0.029842
B-P6A	9685.594348	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-P6A	40407.1106	0.927619	0.001449	B	71 Grassland	61	0.088389
B-P6A	57450.58174	1.318883	0.00206	B	82 Row Crops	86	0.17716
B-P6A	6202.47079	0.142389	0.000222	B	52 Desert Shrub	68	0.015096
B-P6A	9685.593907	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-P6A	9685.59923	0.22235	0.000347	B	71 Grassland	61	0.021167
B-P6A	47489.21001	1.090202	0.001703	B	31 Bare Rock/Sand/Clay	86	0.146458
B-P6A	9685.593053	0.22235	0.000347	B	71 Grassland	61	0.021167
B-P6A	9685.592847	0.22235	0.000347	B	52 Desert Shrub	68	0.023596
B-P6A	1527681.77	35.070747	0.054798	B	52 Desert Shrub	68	3.726264
B-P6A	4088.346498	0.093855	0.000146	B	71 Grassland	61	0.008906
B-P6A	91017.64025	2.089477	0.003264	B	31 Bare Rock/Sand/Clay	86	0.280704
B-P6A	13072.77585	0.300109	0.000468	B	52 Desert Shrub	68	0.031824
B-P6A	54549.10253	1.252275	0.001956	B	71 Grassland	61	0.119316
B-P6A	19371.20187	0.444701	0.000694	B	52 Desert Shrub	68	0.047192
B-P6A	63225.70948	1.451462	0.002267	B	71 Grassland	61	0.138287
B-P6A	321101.9861	7.371487	0.011517	B	82 Row Crops	86	0.990462
B-P6A	5663.617019	0.130018	0.000203	B	31 Bare Rock/Sand/Clay	86	0.017458
B-P6A	28996.48273	0.665667	0.00104	B	31 Bare Rock/Sand/Clay	86	0.08944
B-P6A	43733.65112	1.003986	0.001568	B	71 Grassland	61	0.095648
B-P6A	38742.36464	0.889402	0.001389	B	52 Desert Shrub	68	0.094452
B-P6A	60970.04745	1.399679	0.002186	B	31 Bare Rock/Sand/Clay	86	0.187996
B-P6A	6202.467347	0.142389	0.000222	B	71 Grassland	61	0.013542
B-P6A	6202.473099	0.142389	0.000222	B	71 Grassland	61	0.013542
B-P6A	19371.20109	0.444701	0.000694	B	82 Row Crops	86	0.059684
B-P6A	19371.2002	0.444701	0.000694	B	71 Grassland	61	0.042334
B-P6A	4133.67793	0.094896	0.000148	B	71 Grassland	61	0.009028
B-P6A	19371.20104	0.444701	0.000694	B	71 Grassland	61	0.042334
B-P6A	9685.590875	0.22235	0.000347	B	71 Grassland	61	0.021167

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P6A	6202.473268	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6A	9685.59045	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	29221.63211	0.670836	0.001048	B	71	Grassland	61	0.063928
B-P6A	332845.3297	7.641077	0.011939	B	71	Grassland	61	0.728279
B-P6A	9685.600336	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	273045.6722	6.268266	0.009794	B	52	Desert Shrub	68	0.665992
B-P6A	9685.594516	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	46554.57783	1.068746	0.001669	B	71	Grassland	61	0.101809
B-P6A	6631.647003	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6A	9685.600313	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6A	49826.49137	1.143858	0.001787	B	71	Grassland	61	0.109007
B-P6A	20516.21194	0.470987	0.000735	B	52	Desert Shrub	68	0.04998
B-P6A	9685.594284	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	479392.0195	11.005326	0.017195	B	52	Desert Shrub	68	1.16926
B-P6A	2981.882619	0.068454	0.000106	B	71	Grassland	61	0.006466
B-P6A	9685.594261	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6A	9685.594052	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	26056.66003	0.598178	0.000934	B	52	Desert Shrub	68	0.063512
B-P6A	166556.7817	3.823617	0.005974	B	71	Grassland	61	0.364414
B-P6A	148450.3775	3.407951	0.005324	B	71	Grassland	61	0.324764
B-P6A	187767.5856	4.31055	0.006735	B	52	Desert Shrub	68	0.45798
B-P6A	74937.69145	1.720332	0.002688	B	71	Grassland	61	0.163968
B-P6A	27769.16957	0.637492	0.000996	B	52	Desert Shrub	68	0.067728
B-P6A	52810.69529	1.212366	0.001894	B	71	Grassland	61	0.115534
B-P6A	57753.63713	1.325841	0.002071	B	71	Grassland	61	0.126331
B-P6A	53667.44165	1.232034	0.001925	B	71	Grassland	61	0.117425
B-P6A	544838.445	12.507769	0.019543	B	82	Row Crops	86	1.680698
B-P6A	2020953.912	46.394717	0.072491	B	82	Row Crops	86	6.234226
B-P6A	178414.4556	4.095832	0.006399	B	31	Bare Rock/Sand/Clay	86	0.550314
B-P6A	2309964.145	53.029479	0.082858	B	31	Bare Rock/Sand/Clay	86	7.125788
B-P6A	10577827.79	242.833512	0.379427	B	52	Desert Shrub	68	25.801036
B-P6A	885.948467	0.020338	0.000031	B	71	Grassland	61	0.001891
B-P6A	13072.76982	0.300109	0.000468	B	21	Low Intensity Resid*	65	0.03042
B-P6A	85754.68928	1.968656	0.003076	B	21	Low Intensity Resid*	65	0.19994
B-P6A	377342.893	8.6626	0.013535	B	52	Desert Shrub	68	0.92038
B-P6A	77525.92967	1.77975	0.00278	B	52	Desert Shrub	68	0.18904
B-P6A	33982.97344	0.780141	0.001218	B	21	Low Intensity Resid*	65	0.07917
B-P6A	28631.65682	0.657292	0.001027	B	21	Low Intensity Resid*	65	0.066755
B-P6A	34249.56993	0.786261	0.001228	B	52	Desert Shrub	68	0.083504
B-P6A	1260920.536	28.946752	0.045229	B	52	Desert Shrub	68	3.075572
B-P6A	106541.5413	2.445857	0.003821	B	21	Low Intensity Resid*	65	0.248365
B-P6A	27800.39979	0.638209	0.000997	B	22	High Intensity Resi*	70	0.06979
B-P6A	72368.32516	1.661348	0.002595	B	21	Low Intensity Resid*	65	0.168675
B-P6A	58113.57071	1.334104	0.002084	B	21	Low Intensity Resid*	65	0.13546
B-P6A	39801.73159	0.913722	0.001427	B	22	High Intensity Resi*	70	0.09989
B-P6A	260451.3567	5.97914	0.009342	B	52	Desert Shrub	68	0.635256
B-P6A	21418.67818	0.491705	0.000768	B	21	Low Intensity Resid*	65	0.04992
B-P6A	220239.3582	5.055999	0.007899	B	21	Low Intensity Resid*	65	0.513435
B-P6A	309013.6058	7.093976	0.011084	B	52	Desert Shrub	68	0.753712
B-P6A	87170.37666	2.001156	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-P6A	36566.73946	0.839456	0.001311	B	21	Low Intensity Resid*	65	0.085215
B-P6A	435765.7371	10.003804	0.01563	B	52	Desert Shrub	68	1.06284
B-P6A	96855.94691	2.223506	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-P6A	13040.0081	0.299357	0.000467	B	21	Low Intensity Resid*	65	0.030355
B-P6A	5706434.365	131.001707	0.20469	B	52	Desert Shrub	68	13.91892
B-P6A	177759.7377	4.080802	0.006376	B	21	Low Intensity Resid*	65	0.41444
B-P6A	77484.77947	1.778805	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-P6A	87170.37705	2.001156	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-P6A	54014.61916	1.240005	0.001937	B	82	Row Crops	86	0.166582
B-P6A	28.612983	0.000656	0.000001	B	21	Low Intensity Resid*	65	0.000065
B-P6A	6631.644382	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6A	68390.35554	1.570026	0.002453	B	71	Grassland	61	0.149633
B-P6A	17581.12151	0.403607	0.00063	B	21	Low Intensity Resid*	65	0.04095

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B-P6A	697099.7588	16.003208	0.025005	B	52	Desert Shrub	68	1.70034
B-P6A	55827.78897	1.281629	0.002002	B	21	Low Intensity Resid*	65	0.13013
B-P6A	40407.09536	0.927619	0.001449	B	52	Desert Shrub	68	0.098532
B-P6A	4197597.991	96.36359	0.150568	B	52	Desert Shrub	68	10.238624
B-P6A	207685.2201	4.767796	0.007449	B	21	Low Intensity Resid*	65	0.484185
B-P6A	217270.9894	4.987855	0.007793	B	82	Row Crops	86	0.670198
B-P6A	58113.59388	1.334104	0.002084	B	21	Low Intensity Resid*	65	0.13546
B-P6A	410173.4217	9.416286	0.014712	B	82	Row Crops	86	1.265232
B-P6A	257223.2467	5.905033	0.009226	B	52	Desert Shrub	68	0.627368
B-P6A	5597.24862	0.128495	0.0002	B	71	Grassland	61	0.0122
B-P6A	6202.470468	0.142389	0.000222	B	31	Bare Rock/Sand/Clay	86	0.019092
B-P6A	9685.595308	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	9685.595285	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6A	13650.90453	0.313381	0.000489	B	31	Bare Rock/Sand/Clay	86	0.042054
B-P6A	9685.596324	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6A	15066.36031	0.345876	0.00054	B	31	Bare Rock/Sand/Clay	86	0.04644
B-P6A	44240.02655	1.015611	0.001586	B	71	Grassland	61	0.096746
B-P6A	6202.469492	0.142389	0.000222	B	31	Bare Rock/Sand/Clay	86	0.019092
B-P6A	6202.470392	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6A	29056.7927	0.667052	0.001042	B	52	Desert Shrub	68	0.070856
B-P6A	96855.88527	2.223505	0.003474	B	21	Low Intensity Resid*	65	0.22581
B-P6A	9685.598385	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6A	152496.9979	3.500849	0.00547	B	71	Grassland	61	0.33367
B-P6A	228653.6012	5.249164	0.008201	B	52	Desert Shrub	68	0.557668
B-P6A	34562.24025	0.793439	0.001239	B	71	Grassland	61	0.075579
B-P6A	36973.55547	0.848796	0.001326	B	52	Desert Shrub	68	0.090168
B-P6A	4952.222383	0.113687	0.000177	B	52	Desert Shrub	68	0.012036
B-P6A	10988.60872	0.252263	0.000394	B	52	Desert Shrub	68	0.026792
B-P6A	19086.2305	0.438159	0.000684	B	31	Bare Rock/Sand/Clay	86	0.058824
B-P6A	79867.9068	1.833514	0.002864	B	71	Grassland	61	0.174704
B-P6A	12478.47838	0.286466	0.000447	B	31	Bare Rock/Sand/Clay	86	0.038442
B-P6A	38984.85913	0.894969	0.001398	B	71	Grassland	61	0.085278
B-P6A	161257.6534	3.701966	0.005784	B	52	Desert Shrub	68	0.393312
B-P6A	59594.84703	1.368109	0.002137	B	21	Low Intensity Resid*	65	0.138905
B-P6A	28748.06363	0.659964	0.001031	B	71	Grassland	61	0.062891
B-P6A	337774.799	7.754242	0.012116	B	31	Bare Rock/Sand/Clay	86	1.041976
B-P6A	689438.924	15.827339	0.02473	B	31	Bare Rock/Sand/Clay	86	2.12678
B-P6A	1505711.969	34.56639	0.054009	B	52	Desert Shrub	68	3.672612
B-P6A	9.544153	0.000219	3.42E-07	B	21	Low Intensity Resid*	65	2.22527E-05
B-P6A	150.556366	0.003456	0.000005	B	82	Row Crops	86	0.00043
B-P6A	822.410634	0.018879	0.000029	B	52	Desert Shrub	68	0.001972
B-P6A	56.676066	0.001301	0.000002	B	31	Bare Rock/Sand/Clay	86	0.000172
B-P6A	54.291642	0.001246	0.000001	B	71	Grassland	61	0.000061
B-P6A	290.347466	0.006665	0.000001	B	52	Desert Shrub	68	0.00068
B-P6A	107.682379	0.002472	0.000003	B	71	Grassland	61	0.000183
B-P6A	218.536859	0.005016	0.000007	B	31	Bare Rock/Sand/Clay	86	0.000602
Sum =		2.403139342			Sum =		167.3150293	
CN(II) =		69.62			CN(III) =		84.06	

B-AMD	24100.52204	0.553271	0.000864	D	21	Low Intensity Resid*	82	0.070848
B-AMD	29905.67545	0.686539	0.001072	D	21	Low Intensity Resid*	82	0.087904
B-AMD	29905.67403	0.686539	0.001072	D	21	Low Intensity Resid*	82	0.087904
B-AMD	29905.67261	0.686539	0.001072	D	21	Low Intensity Resid*	82	0.087904
B-AMD	19371.17587	0.444701	0.000694	D	21	Low Intensity Resid*	82	0.056908
B-AMD	577.819058	0.013264	0.00002	D	21	Low Intensity Resid*	82	0.00164
B-AMD	9685.587706	0.22235	0.000347	D	21	Low Intensity Resid*	82	0.028454
B-AMD	752.634848	0.017278	0.000026	D	21	Low Intensity Resid*	82	0.002132
B-AMD	38333.73839	0.880021	0.001375	D	21	Low Intensity Resid*	82	0.11275
B-AMD	45848.70615	1.052541	0.001644	D	21	Low Intensity Resid*	82	0.134808
B-AMD	6631.638842	0.152241	0.000237	D	21	Low Intensity Resid*	82	0.019434
B-AMD	93797.25546	2.153288	0.003364	D	21	Low Intensity Resid*	82	0.275848

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B-AMD	5092103.354	116.898607	0.182654	D	52	Desert Shrub	84	15.342936
B-AMD	4918.491731	0.112913	0.000176	B	21	Low Intensity Resid*	65	0.01144
B-AMD	117989.1375	2.708657	0.004232	B	21	Low Intensity Resid*	65	0.27508
B-AMD	76906.92689	1.76554	0.002758	B	21	Low Intensity Resid*	65	0.17927
B-AMD	5879.008141	0.134963	0.00021	B	21	Low Intensity Resid*	65	0.01365
B-AMD	29056.78366	0.667051	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-AMD	48196.05834	1.106429	0.001728	B	21	Low Intensity Resid*	65	0.11232
B-AMD	50889.68241	1.168266	0.001825	B	21	Low Intensity Resid*	65	0.118625
B-AMD	29056.78282	0.667051	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-AMD	95332.18491	2.188525	0.003419	B	21	Low Intensity Resid*	65	0.222235
B-AMD	145283.8085	3.335257	0.005211	B	21	Low Intensity Resid*	65	0.338715
B-AMD	110272.9311	2.531518	0.003955	B	21	Low Intensity Resid*	65	0.257075
B-AMD	29905.6831	0.68654	0.001072	B	21	Low Intensity Resid*	65	0.06968
B-AMD	19371.18264	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	95272.94334	2.187165	0.003417	B	21	Low Intensity Resid*	65	0.222105
B-AMD	145283.8067	3.335257	0.005211	B	21	Low Intensity Resid*	65	0.338715
B-AMD	29056.77024	0.667051	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-AMD	19991.9377	0.458951	0.000717	B	21	Low Intensity Resid*	65	0.046605
B-AMD	52223.01007	1.198875	0.001873	B	21	Low Intensity Resid*	65	0.121745
B-AMD	13225.38395	0.303613	0.000474	B	21	Low Intensity Resid*	65	0.03081
B-AMD	29056.76786	0.667051	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-AMD	33225.01678	0.762741	0.001191	B	21	Low Intensity Resid*	65	0.077415
B-AMD	29905.67459	0.686539	0.001072	B	21	Low Intensity Resid*	65	0.06968
B-AMD	19371.17715	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	38742.35325	0.889402	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-AMD	217163.5138	4.985388	0.007789	B	82	Row Crops	86	0.669854
B-AMD	38742.35589	0.889402	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-AMD	29056.76446	0.667051	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-AMD	145283.8034	3.335257	0.005211	B	21	Low Intensity Resid*	65	0.338715
B-AMD	19371.17659	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	9685.588461	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	25727.34397	0.590618	0.000922	B	21	Low Intensity Resid*	65	0.05993
B-AMD	9685.58899	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	9685.589165	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	9685.589343	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	60024.17572	1.377965	0.002153	B	21	Low Intensity Resid*	65	0.139945
B-AMD	19371.18045	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	19371.18076	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	19371.18108	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	144033.5593	3.306555	0.005166	B	21	Low Intensity Resid*	65	0.33579
B-AMD	38122.82224	0.875179	0.001367	B	21	Low Intensity Resid*	65	0.088855
B-AMD	19371.18203	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	9685.591183	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	9685.591363	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	44802.95615	1.028534	0.001607	B	21	Low Intensity Resid*	65	0.104455
B-AMD	9685.592295	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	9685.59248	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	9685.592662	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	25727.35516	0.590618	0.000922	B	21	Low Intensity Resid*	65	0.05993
B-AMD	19371.18664	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	9685.593607	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	19371.18756	0.444701	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-AMD	9685.593956	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-AMD	18887.49403	0.433597	0.000677	B	21	Low Intensity Resid*	65	0.044005
B-AMD	60608400.79	1391.377428	2.174027	B	52	Desert Shrub	68	147.833836
		Sum =	2.450874		Sum =		169.663265	
		CN(II) =	69.23		CN(III) =		83.80	
B-P1D	26985.54351	0.619502	0.000967	B	21	Low Intensity Resid*	65	0.062855
B-P1D	34099.41494	0.782814	0.001223	B	21	Low Intensity Resid*	65	0.079495
B-P1D	19371.31116	0.444704	0.000694	B	21	Low Intensity Resid*	65	0.04511

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P1D	19371.31234	0.444704	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-P1D	42845.51875	0.983597	0.001536	B	71	Grassland	61	0.093696
B-P1D	22931.48001	0.526434	0.000822	B	21	Low Intensity Resid*	65	0.05343
B-P1D	1935440.349	44.431596	0.069424	B	52	Desert Shrub	68	4.720832
B-P1D	6220120.03	142.794307	0.223116	A	52	Desert Shrub	49	10.932684
B-P1D	6591094.931	151.310719	0.236422	D	52	Desert Shrub	84	19.859448
	Sum =		0.534898			Sum =		35.89266
			CN(II) =		67.10		CN(III) =	
								82.43
B-QLE	9576.037462	0.219835	0.000343	B	21	Low Intensity Resid*	65	0.022295
B-QLE	19371.23053	0.444702	0.000694	B	71	Grassland	61	0.042334
B-QLE	17882.24366	0.410519	0.000641	B	52	Desert Shrub	68	0.043588
B-QLE	38473.37136	0.883227	0.00138	B	21	Low Intensity Resid*	65	0.0897
B-QLE	72642.62616	1.667645	0.002605	B	21	Low Intensity Resid*	65	0.169325
B-QLE	130.231131	0.002989	0.000004	B	71	Grassland	61	0.000244
B-QLE	23107.13715	0.530466	0.000828	B	52	Desert Shrub	68	0.056304
B-QLE	20942.078	0.480763	0.000751	B	52	Desert Shrub	68	0.051068
B-QLE	461.343382	0.01059	0.000016	B	21	Low Intensity Resid*	65	0.00104
B-QLE	508.492468	0.011673	0.000018	B	71	Grassland	61	0.001098
B-QLE	31270.24943	0.717866	0.001121	B	82	Row Crops	86	0.096406
B-QLE	649688.6045	14.914798	0.023304	B	52	Desert Shrub	68	1.584672
B-QLE	37695.83961	0.865377	0.001352	B	21	Low Intensity Resid*	65	0.08788
B-QLE	9685.624532	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLE	41090.07563	0.943298	0.001473	B	52	Desert Shrub	68	0.100164
B-QLE	9685.62424	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLE	39697.99971	0.91134	0.001423	B	71	Grassland	61	0.086803
B-QLE	285024.5286	6.543262	0.010223	B	71	Grassland	61	0.623603
B-QLE	6631.664869	0.152242	0.000237	B	71	Grassland	61	0.014457
B-QLE	2619.23715	0.060129	0.000093	B	21	Low Intensity Resid*	65	0.006045
B-QLE	19371.2449	0.444702	0.000694	B	21	Low Intensity Resid*	65	0.04511
B-QLE	9685.622032	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLE	9685.621745	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLE	9685.621456	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-QLE	422.738763	0.009704	0.000015	B	21	Low Intensity Resid*	65	0.000975
B-QLE	163938.2208	3.763503	0.00588	B	52	Desert Shrub	68	0.39984
B-QLE	198019.9536	4.545912	0.007102	B	52	Desert Shrub	68	0.482936
B-QLE	270409.9848	6.207759	0.009699	B	21	Low Intensity Resid*	65	0.630435
B-QLE	5436286.788	124.799972	0.194999	B	52	Desert Shrub	68	13.259932
B-QLE	79376.85632	1.822241	0.002847	D	21	Low Intensity Resid*	82	0.233454
B-QLE	233.543066	0.005361	0.000008	D	21	Low Intensity Resid*	82	0.000656
B-QLE	12829986.61	294.535964	0.460212	D	52	Desert Shrub	84	38.657808
B-QLE	26231.80328	0.602199	0.00094	D	52	Desert Shrub	84	0.07896
B-QLE	1244.049647	0.028559	0.000044	B	52	Desert Shrub	68	0.002992
B-QLE	104.849226	0.002407	0.000003	B	21	Low Intensity Resid*	65	0.000195
B-QLE	1068.083733	0.024519	0.000038	B	52	Desert Shrub	68	0.002584
B-QLE	403.396301	0.00926	0.000014	D	21	Low Intensity Resid*	82	0.001148
B-QLE	403.396301	0.00926	0.000014	B	21	Low Intensity Resid*	65	0.00091
B-QLE	1438.599411	0.033025	0.000051	D	52	Desert Shrub	84	0.004284
B-QLE	1438.599411	0.033025	0.000051	B	52	Desert Shrub	68	0.003468
	Sum =		0.730852			Sum =		56.995488
			CN(II) =		77.98		CN(III) =	
								89.07
B-MID	2637.307625	0.060544	0.000094	B	71	Grassland	61	0.005734
B-MID	89975.07537	2.065543	0.003227	B	21	Low Intensity Resid*	65	0.209755
B-MID	4595.418193	0.105496	0.000164	B	21	Low Intensity Resid*	65	0.01066
B-MID	208829.2844	4.79406	0.00749	B	52	Desert Shrub	68	0.50932
B-MID	5085.155252	0.116739	0.000182	B	21	Low Intensity Resid*	65	0.01183
B-MID	136030.7655	3.122836	0.004879	B	21	Low Intensity Resid*	65	0.317135
B-MID	6432667.592	147.673728	0.23074	B	52	Desert Shrub	68	15.69032

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-MID	6202.544667	0.14239	0.000222	D	71	Grassland	80	0.01776
B-MID	6631.726313	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	21224.33216	0.487243	0.000761	D	71	Grassland	80	0.06088
B-MID	22743.46471	0.522118	0.000815	D	71	Grassland	80	0.0652
B-MID	6631.726063	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-MID	8735.521017	0.200539	0.000313	D	52	Desert Shrub	84	0.026292
B-MID	9685.716006	0.222353	0.000347	D	52	Desert Shrub	84	0.029148
B-MID	48428.57695	1.111767	0.001737	D	52	Desert Shrub	84	0.145908
B-MID	41273.20163	0.947502	0.00148	D	71	Grassland	80	0.1184
B-MID	6631.727429	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-MID	6202.542263	0.14239	0.000222	D	71	Grassland	80	0.01776
B-MID	9685.710964	0.222353	0.000347	D	71	Grassland	80	0.02776
B-MID	6631.721012	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	9685.711302	0.222353	0.000347	D	71	Grassland	80	0.02776
B-MID	9685.70903	0.222353	0.000347	D	52	Desert Shrub	84	0.029148
B-MID	9685.708654	0.222353	0.000347	D	71	Grassland	80	0.02776
B-MID	6202.544078	0.14239	0.000222	D	71	Grassland	80	0.01776
B-MID	25467.56617	0.584654	0.000913	D	52	Desert Shrub	84	0.076692
B-MID	30047.38472	0.689793	0.001077	D	71	Grassland	80	0.08616
B-MID	84012.69493	1.928666	0.003013	D	71	Grassland	80	0.24104
B-MID	9685.7127	0.222353	0.000347	D	52	Desert Shrub	84	0.029148
B-MID	6202.544913	0.14239	0.000222	D	52	Desert Shrub	84	0.018648
B-MID	6631.725379	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-MID	27642.37641	0.634581	0.000991	D	71	Grassland	80	0.07928
B-MID	6202.54024	0.14239	0.000222	D	52	Desert Shrub	84	0.018648
B-MID	16189.74295	0.371665	0.00058	D	71	Grassland	80	0.0464
B-MID	6631.720362	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	144035.5134	3.3066	0.005166	D	71	Grassland	80	0.41328
B-MID	6631.722862	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	65561.38846	1.505082	0.002351	D	71	Grassland	80	0.18808
B-MID	6631.721011	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	6631.723646	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-MID	40861.56493	0.938052	0.001465	D	71	Grassland	80	0.1172
B-MID	3624782.734	83.213561	0.130021	D	71	Grassland	80	10.40168
B-MID	6631.726097	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	6631.724746	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	128535.3487	2.950765	0.00461	D	71	Grassland	80	0.3688
B-MID	9685.701711	0.222353	0.000347	D	71	Grassland	80	0.02776
B-MID	6631.717633	0.152243	0.000237	D	71	Grassland	80	0.01896
B-MID	183028.7753	4.201762	0.006565	D	71	Grassland	80	0.5252
B-MID	36056.18033	0.827736	0.001293	D	71	Grassland	80	0.10344
B-MID	23056248.69	529.298638	0.827029	D	52	Desert Shrub	84	69.470436
B-MID	39658.88798	0.910442	0.001422	A	71	Grassland	39	0.055458
B-MID	10645483.15	244.386665	0.381854	A	52	Desert Shrub	49	18.710846
B-MID	45278652.46	1039.454831	1.624148	D	52	Desert Shrub	84	136.428432
B-MID	6631.703487	0.152242	0.000237	B	52	Desert Shrub	68	0.016116
B-MID	255896.737	5.87458	0.009179	B	71	Grassland	61	0.559919
B-MID	28006737.26	642.946218	1.004603	B	52	Desert Shrub	68	68.313004
B-MID	65025521.09	1492.780557	2.332469	D	52	Desert Shrub	84	195.927396
Sum =		6.597251			Sum =	519.820665		
CN(II) =		78.79			CN(III) =	89.52		

B-QLC	47755.6895	1.096319	0.001712	B	52	Desert Shrub	68	0.116416
B-QLC	81672.46281	1.874941	0.002929	B	21	Low Intensity Resid*	65	0.190385
B-QLC	164815.8723	3.783651	0.005911	B	52	Desert Shrub	68	0.401948
B-QLC	17993.84926	0.413081	0.000645	B	21	Low Intensity Resid*	65	0.041925
B-QLC	3921.277994	0.09002	0.00014	B	52	Desert Shrub	68	0.00952
B-QLC	138.015996	0.003168	0.000004	D	71	Grassland	80	0.00032
B-QLC	5319.830697	0.122126	0.00019	D	52	Desert Shrub	84	0.01596
B-QLC	13226.14963	0.30363	0.000474	D	71	Grassland	80	0.03792
B-QLC	32691.69251	0.750497	0.001172	D	71	Grassland	80	0.09376

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-QLC	13226.1472	0.30363	0.000474	D	71	Grassland	80	0.03792
B-QLC	11256.98164	0.258424	0.000403	D	71	Grassland	80	0.03224
B-QLC	6202.51344	0.14239	0.000222	D	71	Grassland	80	0.01776
B-QLC	93678.88284	2.150571	0.00336	D	71	Grassland	80	0.2688
B-QLC	6631.690973	0.152242	0.000237	D	71	Grassland	80	0.01896
B-QLC	9685.664739	0.222352	0.000347	D	71	Grassland	80	0.02776
B-QLC	3181.902722	0.073046	0.000114	D	71	Grassland	80	0.00912
B-QLC	9685.665027	0.222352	0.000347	D	71	Grassland	80	0.02776
B-QLC	6420.488572	0.147394	0.00023	D	71	Grassland	80	0.0184
B-QLC	63700.47164	1.462361	0.002284	D	71	Grassland	80	0.18272
B-QLC	20909.08921	0.480006	0.00075	D	71	Grassland	80	0.06
B-QLC	9685.663632	0.222352	0.000347	D	71	Grassland	80	0.02776
B-QLC	5885.923712	0.135122	0.000211	D	71	Grassland	80	0.01688
B-QLC	31342.46935	0.719524	0.001124	D	71	Grassland	80	0.08992
B-QLC	3643583.038	83.645156	0.130695	D	52	Desert Shrub	84	10.97838
B-QLC	1313233.821	30.1477	0.047105	A	52	Desert Shrub	49	2.308145
B-QLC	12194.73938	0.279952	0.000437	D	21	Low Intensity Resid*	82	0.035834
B-QLC	19371.27722	0.444703	0.000694	D	21	Low Intensity Resid*	82	0.056908
B-QLC	29898.73167	0.68638	0.001072	D	21	Low Intensity Resid*	82	0.087904
B-QLC	34320.63677	0.787893	0.001231	D	21	Low Intensity Resid*	82	0.100942
B-QLC	34320.63781	0.787893	0.001231	D	71	Grassland	80	0.09848
B-QLC	13943.1986	0.320091	0.0005	D	71	Grassland	80	0.04
B-QLC	51458.50011	1.181324	0.001845	D	21	Low Intensity Resid*	82	0.15129
B-QLC	26128.32899	0.599823	0.000937	D	21	Low Intensity Resid*	82	0.076834
B-QLC	40311.49867	0.925424	0.001445	D	71	Grassland	80	0.1156
B-QLC	87170.67768	2.001163	0.003126	D	21	Low Intensity Resid*	82	0.256332
B-QLC	38742.52922	0.889406	0.001389	D	21	Low Intensity Resid*	82	0.113898
B-QLC	9685.631584	0.222351	0.000347	D	21	Low Intensity Resid*	82	0.028454
B-QLC	29056.89302	0.667054	0.001042	D	21	Low Intensity Resid*	82	0.085444
B-QLC	64120.1689	1.471996	0.002299	D	21	Low Intensity Resid*	82	0.188518
B-QLC	334010.4355	7.667824	0.01198	D	52	Desert Shrub	84	1.00632
B-QLC	9685.630582	0.222351	0.000347	D	21	Low Intensity Resid*	82	0.028454
B-QLC	50502.95701	1.159388	0.001811	D	21	Low Intensity Resid*	82	0.148502
B-QLC	6631.671386	0.152242	0.000237	D	21	Low Intensity Resid*	82	0.019434
B-QLC	96856.35009	2.223515	0.003474	D	21	Low Intensity Resid*	82	0.284868
B-QLC	34872.38778	0.800559	0.00125	D	21	Low Intensity Resid*	82	0.1025
B-QLC	636410.974	14.609985	0.022828	D	52	Desert Shrub	84	1.917552
B-QLC	478949.3915	10.995165	0.017179	D	21	Low Intensity Resid*	82	1.408678
B-QLC	6202.508505	0.14239	0.000222	D	71	Grassland	80	0.01776
B-QLC	11255.79911	0.258397	0.000403	D	52	Desert Shrub	84	0.033852
B-QLC	129928.6774	2.982752	0.00466	D	71	Grassland	80	0.3728
B-QLC	33832696.45	776.691837	1.21358	D	52	Desert Shrub	84	101.94072
Sum =		1.496993	Sum =		123.748557			
CN(II) =		82.66	CN(III) =		91.64			

B-EDE	8804.406421	0.202121	0.000315	B	21	Low Intensity Resid*	65	0.020475
B-EDE	52798.81772	1.212094	0.001893	B	52	Desert Shrub	68	0.128724
B-EDE	78154.97425	1.794191	0.002803	B	21	Low Intensity Resid*	65	0.182195
B-EDE	26305.6084	0.603893	0.000943	B	82	Row Crops	86	0.081098
B-EDE	467.459793	0.010731	0.000016	B	52	Desert Shrub	68	0.001088
B-EDE	1036786.545	23.801344	0.037189	B	52	Desert Shrub	68	2.528852
B-EDE	106619.7274	2.447652	0.003824	B	31	Bare Rock/Sand/Clay	86	0.328864
B-EDE	110332.3998	2.532883	0.003957	B	71	Grassland	61	0.241377
B-EDE	191374.9472	4.393364	0.006864	B	71	Grassland	61	0.418704
B-EDE	52609.24794	1.207742	0.001887	B	71	Grassland	61	0.115107
B-EDE	6631.654188	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-EDE	38742.44358	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	48428.05509	1.111755	0.001737	B	21	Low Intensity Resid*	65	0.112905
B-EDE	19412.27812	0.445644	0.000696	B	21	Low Intensity Resid*	65	0.04524
B-EDE	33225.10073	0.762743	0.001191	B	21	Low Intensity Resid*	65	0.077415
B-EDE	38742.44611	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-EDE	6000.958938	0.137763	0.000215	B	21	Low Intensity Resid*	65	0.013975
B-EDE	77484.94174	1.778809	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-EDE	87170.54002	2.00116	0.003126	B	21	Low Intensity Resid*	65	0.20319
B-EDE	6631.65805	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-EDE	38333.82454	0.880023	0.001375	B	21	Low Intensity Resid*	65	0.089375
B-EDE	77484.87414	1.778807	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-EDE	166833.2411	3.829964	0.005984	B	21	Low Intensity Resid*	65	0.38896
B-EDE	77484.8588	1.778807	0.002779	B	21	Low Intensity Resid*	65	0.180635
B-EDE	14876.1441	0.341509	0.000533	B	21	Low Intensity Resid*	65	0.034645
B-EDE	38742.44775	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.4483	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.44885	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.4494	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	29056.83751	0.667053	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-EDE	13075.51585	0.300172	0.000469	B	21	Low Intensity Resid*	65	0.030485
B-EDE	6631.655578	0.152241	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-EDE	38742.45172	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.45227	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	65330.59666	1.499784	0.002343	B	21	Low Intensity Resid*	65	0.152295
B-EDE	38742.45404	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	29056.84099	0.667053	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-EDE	38742.45526	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.45582	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	38742.45638	0.889404	0.001389	B	21	Low Intensity Resid*	65	0.090285
B-EDE	27815.46677	0.638555	0.000997	B	21	Low Intensity Resid*	65	0.064805
B-EDE	9963.881722	0.228739	0.000357	B	21	Low Intensity Resid*	65	0.023205
B-EDE	74672407.53	1714.242597	2.678504	B	52	Desert Shrub	68	182.138272
		Sum =	2.785018			Sum =		189.228251
		CN(II) =	67.95			CN(III) =		82.98

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-LID	7525.744945	0.172767	0.000269	B	21	Low Intensity Resid*	65	0.017485
B-LID	9685.650026	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	9685.650296	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	9685.650566	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	9685.650836	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	60024.55843	1.377974	0.002153	B	21	Low Intensity Resid*	65	0.139945
B-LID	9685.652196	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	9685.652468	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	53355.46629	1.224872	0.001913	B	71	Grassland	61	0.116693
B-LID	9685.652741	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	45752.78761	1.050339	0.001641	B	82	Row Crops	86	0.141126
B-LID	52540.39042	1.206161	0.001884	B	21	Low Intensity Resid*	65	0.12246
B-LID	6631.685134	0.152242	0.000237	B	21	Low Intensity Resid*	65	0.015405
B-LID	9685.642053	0.222351	0.000347	B	22	High Intensity Resi*	70	0.02429
B-LID	71497.69592	1.641361	0.002564	B	21	Low Intensity Resid*	65	0.16666
B-LID	29056.92782	0.667055	0.001042	B	22	High Intensity Resi*	70	0.07294
B-LID	29056.93036	0.667055	0.001042	B	22	High Intensity Resi*	70	0.07294
B-LID	29056.92772	0.667055	0.001042	B	21	Low Intensity Resid*	65	0.06773
B-LID	44063.05958	1.011548	0.00158	B	21	Low Intensity Resid*	65	0.1027
B-LID	29056.93715	0.667055	0.001042	B	22	High Intensity Resi*	70	0.07294
B-LID	9685.645122	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-LID	71715.3596	1.646358	0.002572	B	22	High Intensity Resi*	70	0.18004
B-LID	9685.646573	0.222351	0.000347	B	22	High Intensity Resi*	70	0.02429
B-LID	15627.91585	0.358767	0.00056	B	22	High Intensity Resi*	70	0.0392
B-LID	60906.55536	1.398222	0.002184	B	21	Low Intensity Resid*	65	0.14196
B-LID	228.235769	0.005239	0.000008	B	21	Low Intensity Resid*	65	0.00052
B-LID	110123.6463	2.528091	0.00395	B	21	Low Intensity Resid*	65	0.25675
B-LID	12180823.9	279.633239	0.436926	B	52	Desert Shrub	68	29.710968
B-LID	36555.56653	0.8392	0.001311	D	71	Grassland	80	0.10488
B-LID	6631.720665	0.152243	0.000237	D	71	Grassland	80	0.01896
B-LID	9685.70815	0.222353	0.000347	D	71	Grassland	80	0.02776
B-LID	6202.541994	0.14239	0.000222	D	71	Grassland	80	0.01776
B-LID	6631.721273	0.152243	0.000237	D	71	Grassland	80	0.01896
B-LID	35672.15954	0.81892	0.001279	D	71	Grassland	80	0.10232
B-LID	6631.720983	0.152243	0.000237	D	71	Grassland	80	0.01896
B-LID	47044.50102	1.079993	0.001687	D	71	Grassland	80	0.13496
B-LID	6631.709624	0.152243	0.000237	D	71	Grassland	80	0.01896
B-LID	156179.091	3.585378	0.005602	D	71	Grassland	80	0.44816
B-LID	37089.23187	0.851451	0.00133	D	71	Grassland	80	0.1064
B-LID	27642.33543	0.63458	0.000991	D	71	Grassland	80	0.07928
B-LID	22944.38308	0.52673	0.000823	D	71	Grassland	80	0.06584
B-LID	9685.68756	0.222352	0.000347	D	71	Grassland	80	0.02776
B-LID	52318.31674	1.201063	0.001876	D	71	Grassland	80	0.15008
B-LID	6202.530336	0.14239	0.000222	D	52	Desert Shrub	84	0.018648
B-LID	73023.68916	1.676393	0.002619	D	71	Grassland	80	0.20952
B-LID	13226.17856	0.303631	0.000474	D	71	Grassland	80	0.03792
B-LID	6631.704697	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	6631.702739	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-LID	6631.694752	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-LID	6202.529419	0.14239	0.000222	D	71	Grassland	80	0.01776
B-LID	6631.704118	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-LID	9685.683958	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	219357.6075	5.035757	0.007868	D	71	Grassland	80	0.62944
B-LID	9685.681155	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	21888.84918	0.502498	0.000785	D	71	Grassland	80	0.0628
B-LID	1800.752083	0.041339	0.000064	D	71	Grassland	80	0.00512
B-LID	63301.93586	1.453212	0.00227	D	52	Desert Shrub	84	0.19068
B-LID	91073.62985	2.090762	0.003266	D	71	Grassland	80	0.26128
B-LID	13072.88365	0.300112	0.000468	D	71	Grassland	80	0.03744
B-LID	6631.702743	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-LID	6631.702047	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	53729.55149	1.23346	0.001927	D	71	Grassland	80	0.15416

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-LID	7012.826962	0.160992	0.000251	D	71	Grassland	80	0.02008
B-LID	4678.490354	0.107403	0.000167	D	52	Desert Shrub	84	0.014028
B-LID	13072.87035	0.300111	0.000468	D	71	Grassland	80	0.03744
B-LID	1034321.627	23.744757	0.037101	D	71	Grassland	80	2.96808
B-LID	6631.694004	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	6202.523455	0.14239	0.000222	D	71	Grassland	80	0.01776
B-LID	9685.679188	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	60107.50378	1.379878	0.002156	D	71	Grassland	80	0.17248
B-LID	285655.4097	6.557745	0.010246	D	71	Grassland	80	0.81968
B-LID	33429.3679	0.767432	0.001199	D	71	Grassland	80	0.09592
B-LID	6953.24417	0.159624	0.000249	D	71	Grassland	80	0.01992
B-LID	11257.00396	0.258425	0.000403	D	52	Desert Shrub	84	0.033852
B-LID	22439.38469	0.515137	0.000804	D	71	Grassland	80	0.06432
B-LID	204113.9966	4.685812	0.007321	D	71	Grassland	80	0.58568
B-LID	6631.697923	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-LID	9685.674902	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	13226.16049	0.30363	0.000474	D	52	Desert Shrub	84	0.039816
B-LID	9685.667938	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	766848.3291	17.604415	0.027506	D	71	Grassland	80	2.20048
B-LID	73116.12065	1.678515	0.002622	D	71	Grassland	80	0.20976
B-LID	6593.805871	0.151372	0.000236	D	52	Desert Shrub	84	0.019824
B-LID	13511.69905	0.310185	0.000484	D	52	Desert Shrub	84	0.040656
B-LID	66493.82206	1.526488	0.002385	D	71	Grassland	80	0.1908
B-LID	6631.697569	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	472593.5869	10.849255	0.016951	D	71	Grassland	80	1.35608
B-LID	19371.33723	0.444704	0.000694	D	71	Grassland	80	0.05552
B-LID	88726.15582	2.036872	0.003182	D	71	Grassland	80	0.25456
B-LID	25467.45599	0.584652	0.000913	D	71	Grassland	80	0.07304
B-LID	73053.99075	1.677088	0.00262	D	52	Desert Shrub	84	0.22008
B-LID	46763.6308	1.073545	0.001677	D	71	Grassland	80	0.13416
B-LID	6631.69506	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	6631.696899	0.152242	0.000237	D	71	Grassland	80	0.01896
B-LID	233334.5517	5.356624	0.008369	D	71	Grassland	80	0.66952
B-LID	38742.68141	0.889409	0.001389	D	71	Grassland	80	0.11112
B-LID	1311.861762	0.030116	0.000047	D	52	Desert Shrub	84	0.003948
B-LID	47987.4291	1.101639	0.001721	D	71	Grassland	80	0.13768
B-LID	3.048065	0.000069	1.09E-07	D	71	Grassland	80	8.74674E-06
B-LID	7367.745491	0.16914	0.000264	D	71	Grassland	80	0.02112
B-LID	157380.1489	3.612951	0.005645	D	71	Grassland	80	0.4516
B-LID	22023050.56	505.579673	0.789968	D	52	Desert Shrub	84	66.357312
B-LID	2937702.158	67.440361	0.105375	A	52	Desert Shrub	49	5.163375
B-LID	925265.7048	21.241177	0.033189	D	52	Desert Shrub	84	2.787876
B-LID	1808151.471	41.509446	0.064858	A	52	Desert Shrub	49	3.178042
B-LID	7004.650566	0.160804	0.000251	D	21	Low Intensity Resid*	82	0.020582
B-LID	3092921.889	71.003716	0.110943	D	52	Desert Shrub	84	9.319212
B-LID	26080.78447	0.598732	0.000935	D	21	Low Intensity Resid*	82	0.07667
B-LID	13429.02556	0.308288	0.000481	D	22	High Intensity Resi*	85	0.040885
B-LID	19371.29571	0.444703	0.000694	D	22	High Intensity Resi*	85	0.05899
B-LID	19371.31152	0.444704	0.000694	D	22	High Intensity Resi*	85	0.05899
B-LID	19371.3127	0.444704	0.000694	D	22	High Intensity Resi*	85	0.05899
B-LID	19371.31388	0.444704	0.000694	D	22	High Intensity Resi*	85	0.05899
B-LID	599094.6173	13.753319	0.021489	D	21	Low Intensity Resid*	82	1.762098
B-LID	363792.2805	8.351521	0.013049	D	21	Low Intensity Resid*	82	1.070018
B-LID	592931.0114	13.611823	0.021268	D	21	Low Intensity Resid*	82	1.743976
B-LID	141009.8853	3.237141	0.005058	D	21	Low Intensity Resid*	82	0.414756
B-LID	9685.674593	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-LID	22745.7323	0.52217	0.000815	D	71	Grassland	80	0.0652
B-LID	6631.698634	0.152242	0.000237	D	31	Bare Rock/Sand/Clay	94	0.022278
B-LID	55083.71573	1.264548	0.001975	D	31	Bare Rock/Sand/Clay	94	0.18565
B-LID	7511.498658	0.17244	0.000269	D	71	Grassland	80	0.02152
B-LID	9147.585159	0.209999	0.000328	D	71	Grassland	80	0.02624
B-LID	972765.118	22.331614	0.034893	D	21	Low Intensity Resid*	82	2.861226
B-LID	64717.57883	1.485711	0.002321	D	71	Grassland	80	0.18568

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-LID	386258.7354	8.86728	0.013855 D		71	Grassland	80	1.1084
B-LID	157589.8969	3.617766	0.005652 D		21	Low Intensity Resid*	82	0.463464
B-LID	192733.8862	4.424561	0.006913 D		21	Low Intensity Resid*	82	0.566866
B-LID	13511.68746	0.310185	0.000484 D		71	Grassland	80	0.03872
B-LID	24340.45082	0.558779	0.000873 D		71	Grassland	80	0.06984
B-LID	19371.32663	0.444704	0.000694 D		52	Desert Shrub	84	0.058296
B-LID	81401.08854	1.868711	0.002919 D		71	Grassland	80	0.23352
B-LID	33442.99133	0.767745	0.001199 D		71	Grassland	80	0.09592
B-LID	102111682.4	2344.16167	3.662752 D		52	Desert Shrub	84	307.671168
	Sum =		5.551301109		Sum =			451.9052407
	CN(II) =		81.41		CN(III) =			90.97
B-LIB	1291772.679	29.65502	0.046335 B		52	Desert Shrub	68	3.15078
B-LIB	694.895998	0.015952	0.000024 D		71	Grassland	80	0.00192
B-LIB	17386.44734	0.399137	0.000623 D		71	Grassland	80	0.04984
B-LIB	2208.43544	0.050698	0.000079 D		71	Grassland	80	0.00632
B-LIB	786690.1484	18.05992	0.028218 D		52	Desert Shrub	84	2.370312
B-LIB	3558703.287	81.696586	0.12765 A		52	Desert Shrub	49	6.25485
B-LIB	12843189.54	294.839061	0.460686 D		52	Desert Shrub	84	38.697624
	Sum =		0.663615		Sum =			50.531646
	CN(II) =		76.15		CN(III) =			88.01
B-LIC	3500708.487	80.365208	0.12557 B		52	Desert Shrub	68	8.53876
B-LIC	3152424.166	72.3697	0.113077 A		52	Desert Shrub	49	5.540773
B-LIC	83779.76157	1.923318	0.003005 D		71	Grassland	80	0.2404
B-LIC	69874.73921	1.604103	0.002506 D		71	Grassland	80	0.20048
B-LIC	37631.58037	0.863902	0.001349 D		71	Grassland	80	0.10792
B-LIC	9795190.218	224.866625	0.351354 D		52	Desert Shrub	84	29.513736
	Sum =		0.596861		Sum =			44.142069
	CN(II) =		73.96		CN(III) =			86.72
B-QLB	1510507.697	34.676485	0.054182 B		52	Desert Shrub	68	3.684376
B-QLB	25330.09049	0.581498	0.000908 D		71	Grassland	80	0.07264
B-QLB	9598.153408	0.220343	0.000344 D		71	Grassland	80	0.02752
B-QLB	38994.82186	0.895197	0.001398 D		71	Grassland	80	0.11184
B-QLB	6365.620644	0.146134	0.000228 D		71	Grassland	80	0.01824
B-QLB	2340741.621	53.736033	0.083962 D		52	Desert Shrub	84	7.052808
B-QLB	5819957.748	133.607845	0.208762 A		52	Desert Shrub	49	10.229338
B-QLB	73272.68838	1.682109	0.002628 D		71	Grassland	80	0.21024
B-QLB	188049.0146	4.317011	0.006745 D		71	Grassland	80	0.5396
B-QLB	878.089442	0.020158	0.000031 D		21	Low Intensity Resid*	82	0.002542
B-QLB	16512144.05	379.066667	0.592291 D		52	Desert Shrub	84	49.752444
	Sum =		0.951479		Sum =			71.701588
	CN(II) =		75.36		CN(III) =			87.55
B-P6E	2188.813616	0.050248	0.000078 B		71	Grassland	61	0.004758
B-P6E	6202.48223	0.142389	0.000222 B		71	Grassland	61	0.013542
B-P6E	25658.27157	0.589032	0.00092 B		52	Desert Shrub	68	0.06256
B-P6E	64.365861	0.001477	0.000002 B		21	Low Intensity Resid*	65	0.00013
B-P6E	9685.611649	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-P6E	9685.6111382	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-P6E	4362.578447	0.100151	0.000156 B		71	Grassland	61	0.009516
B-P6E	9685.611113	0.222351	0.000347 B		21	Low Intensity Resid*	65	0.022555
B-P6E	9685.607307	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-P6E	19488.61498	0.447397	0.000699 B		52	Desert Shrub	68	0.047532

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC(LandUse)	CN	CN*A
B-P6E	9685.610846	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6E	6631.656419	0.152241	0.000237	B	71 Grassland	61	0.014457
B-P6E	6202.481495	0.142389	0.000222	B	52 Desert Shrub	68	0.015096
B-P6E	9685.61058	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6E	6202.481003	0.142389	0.000222	B	52 Desert Shrub	68	0.015096
B-P6E	9685.610312	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6E	19371.22839	0.444702	0.000694	B	71 Grassland	61	0.042334
B-P6E	9685.610048	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6E	9685.609783	0.222351	0.000347	B	21 Low Intensity Resid*	65	0.022555
B-P6E	19371.22877	0.444702	0.000694	B	71 Grassland	61	0.042334
B-P6E	134296.1326	3.083014	0.004817	B	71 Grassland	61	0.293837
B-P6E	184626.8976	4.23845	0.006622	B	52 Desert Shrub	68	0.450296
B-P6E	6631.657761	0.152241	0.000237	B	71 Grassland	61	0.014457
B-P6E	695832.9849	15.974127	0.024959	B	82 Row Crops	86	2.146474
B-P6E	1521.332011	0.034924	0.000054	B	52 Desert Shrub	68	0.003672
B-P6E	1075144.792	24.681928	0.038565	B	82 Row Crops	86	3.31659
B-P6E	34091.93576	0.782643	0.001222	B	52 Desert Shrub	68	0.083096
B-P6E	2251.614396	0.051689	0.000008	B	71 Grassland	61	0.004488
B-P6E	34091.92768	0.782642	0.001222	B	52 Desert Shrub	68	0.083096
B-P6E	4044386.981	92.846349	0.145072	B	52 Desert Shrub	68	9.864896
B-P6E	81393.99124	1.868548	0.002919	B	71 Grassland	61	0.178059
B-P6E	148922.8972	3.418799	0.005341	B	82 Row Crops	86	0.459326
B-P6E	108253.3529	2.485155	0.003883	B	52 Desert Shrub	68	0.264044
B-P6E	844263.9001	19.381632	0.030283	B	21 Low Intensity Resid*	65	1.968395
B-P6E	9583.06761	0.219996	0.000343	B	71 Grassland	61	0.020923
B-P6E	6631.650309	0.152241	0.000237	B	71 Grassland	61	0.014457
B-P6E	2364.06061	0.054271	0.000084	B	71 Grassland	61	0.005124
B-P6E	938019.9166	21.533974	0.033646	B	82 Row Crops	86	2.893556
B-P6E	64373.20817	1.477805	0.002309	B	31 Bare Rock/Sand/Clay	86	0.198574
B-P6E	214612.8662	4.926833	0.007698	B	52 Desert Shrub	68	0.523464
B-P6E	31511.89174	0.723413	0.00113	B	52 Desert Shrub	68	0.07684
B-P6E	1594832.152	36.612308	0.057206	B	52 Desert Shrub	68	3.890008
B-P6E	6951.619768	0.159587	0.000249	B	52 Desert Shrub	68	0.016932
B-P6E	626773.8837	14.388748	0.022482	B	21 Low Intensity Resid*	65	1.46133
B-P6E	5867236.202	134.693209	0.210458	B	52 Desert Shrub	68	14.311144
B-P6E	1953.212446	0.044839	0.000007	D	52 Desert Shrub	84	0.005588
B-P6E	157186.0763	3.608495	0.005638	D	71 Grassland	80	0.45104
B-P6E	6631.706029	0.152243	0.000237	D	71 Grassland	80	0.01896
B-P6E	35602.55827	0.817322	0.001277	D	71 Grassland	80	0.10216
B-P6E	4303.758718	0.0988	0.000154	D	71 Grassland	80	0.01232
B-P6E	1265.098891	0.029042	0.000045	D	71 Grassland	80	0.0036
B-P6E	37.894288	0.000869	0.000001	D	52 Desert Shrub	84	0.000084
B-P6E	13998.16361	0.321353	0.000502	D	71 Grassland	80	0.04016
B-P6E	19371.35586	0.444705	0.000694	D	71 Grassland	80	0.05552
B-P6E	2648.967964	0.060811	0.000095	D	52 Desert Shrub	84	0.00798
B-P6E	1903.371596	0.043695	0.000068	D	71 Grassland	80	0.00544
B-P6E	279810.2329	6.423559	0.010036	D	71 Grassland	80	0.80288
B-P6E	21585.03989	0.495524	0.000774	D	71 Grassland	80	0.06192
B-P6E	3.745559	0.000085	1.34E-07	D	71 Grassland	80	1.07483E-05
B-P6E	6631.709525	0.152243	0.000237	D	52 Desert Shrub	84	0.019908
B-P6E	22362.80612	0.513379	0.000802	D	71 Grassland	80	0.06416
B-P6E	6628.648258	0.152172	0.000237	D	71 Grassland	80	0.01896
B-P6E	60947.88938	1.399171	0.002186	D	71 Grassland	80	0.17488
B-P6E	133005.8623	3.053394	0.00477	D	71 Grassland	80	0.3816
B-P6E	6631.69401	0.152242	0.000237	D	90 Wetland	89	0.021093
B-P6E	6202.517532	0.14239	0.000222	D	90 Wetland	89	0.019758
B-P6E	3449.788579	0.079196	0.000123	D	71 Grassland	80	0.00984
B-P6E	13511.70284	0.310186	0.000484	D	71 Grassland	80	0.03872
B-P6E	3265.176741	0.074958	0.000117	D	71 Grassland	80	0.00936
B-P6E	6631.699013	0.152242	0.000237	D	71 Grassland	80	0.01896
B-P6E	22944.34024	0.526729	0.000823	D	90 Wetland	89	0.073247
B-P6E	13225.50876	0.303615	0.000474	D	71 Grassland	80	0.03792
B-P6E	23097.31554	0.530241	0.000828	D	71 Grassland	80	0.06624

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B-P6E	413505.2914	9.492775	0.014832 D		71	Grassland	80	1.18656
B-P6E	316.591512	0.007267	0.000011 D		71	Grassland	80	0.00088
B-P6E	26984.68779	0.619483	0.000967 D		71	Grassland	80	0.07736
B-P6E	493.28618	0.011324	0.000017 D		71	Grassland	80	0.00136
B-P6E	9685.685938	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	31216.38412	0.716629	0.001119 D		52	Desert Shrub	84	0.093996
B-P6E	54783.03017	1.257645	0.001965 D		71	Grassland	80	0.1572
B-P6E	254245.596	5.836675	0.009119 D		71	Grassland	80	0.72952
B-P6E	3213.030955	0.073761	0.000115 D		52	Desert Shrub	84	0.00966
B-P6E	38116.47645	0.875033	0.001367 D		71	Grassland	80	0.10936
B-P6E	6631.690973	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	1485.229933	0.034096	0.000053 D		71	Grassland	80	0.00424
B-P6E	13026.66112	0.29905	0.000467 D		71	Grassland	80	0.03736
B-P6E	30640042.88	703.398596	1.09906 D		52	Desert Shrub	84	92.32104
B-P6E	1384.663577	0.031787	0.000049 D		71	Grassland	80	0.00392
B-P6E	6631.696198	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	4446.075396	0.102067	0.000159 D		71	Grassland	80	0.01272
B-P6E	1251.870567	0.028738	0.000044 D		71	Grassland	80	0.00352
B-P6E	6202.518591	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	6202.518854	0.14239	0.000222 D		52	Desert Shrub	84	0.018648
B-P6E	6202.519291	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	24567.70678	0.563996	0.000881 D		71	Grassland	80	0.07048
B-P6E	9685.673976	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	6202.521239	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	55113.27629	1.265226	0.001976 D		71	Grassland	80	0.15808
B-P6E	6631.698625	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	22482.09701	0.516117	0.000806 D		71	Grassland	80	0.06448
B-P6E	6631.698992	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	44048.72556	1.011219	0.00158 D		71	Grassland	80	0.1264
B-P6E	6202.507856	0.142389	0.000222 D		71	Grassland	80	0.01776
B-P6E	6202.519057	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	6631.69733	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	13075.57734	0.300173	0.000469 D		71	Grassland	80	0.03752
B-P6E	6202.507387	0.142389	0.000222 D		71	Grassland	80	0.01776
B-P6E	6202.520367	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	9685.674372	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	9685.674036	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	165.924112	0.003809	0.000005 D		71	Grassland	80	0.0004
B-P6E	217547.6725	4.994207	0.007803 D		71	Grassland	80	0.62424
B-P6E	25467.42978	0.584651	0.000913 D		71	Grassland	80	0.07304
B-P6E	6631.691225	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	6631.685745	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	6631.699303	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	67799.72588	1.556467	0.002431 D		71	Grassland	80	0.19448
B-P6E	9685.657096	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	9685.675233	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	29723.89227	0.682366	0.001066 D		71	Grassland	80	0.08528
B-P6E	9685.675533	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	9685.675834	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	62829.67028	1.44237	0.002253 D		71	Grassland	80	0.18024
B-P6E	6631.695991	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	9685.672076	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	1852.835054	0.042535	0.000066 D		52	Desert Shrub	84	0.005544
B-P6E	9685.676363	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	27421.92139	0.62952	0.000983 D		71	Grassland	80	0.07864
B-P6E	6631.700307	0.152242	0.000237 D		52	Desert Shrub	84	0.019908
B-P6E	177.476412	0.004074	0.000006 D		52	Desert Shrub	84	0.000504
B-P6E	6631.699311	0.152242	0.000237 D		52	Desert Shrub	84	0.019908
B-P6E	83255.87499	1.911291	0.002986 D		52	Desert Shrub	84	0.250824
B-P6E	6631.686075	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	9685.674868	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	6631.695763	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	6631.699236	0.152242	0.000237 D		52	Desert Shrub	84	0.019908

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B-P6E	7851.363147	0.180242	0.000281	D	52	Desert Shrub	84	0.023604
B-P6E	22944.95102	0.526743	0.000823	D	52	Desert Shrub	84	0.069132
B-P6E	256379.0446	5.885652	0.009196	D	71	Grassland	80	0.73568
B-P6E	6202.520807	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	6631.696858	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	38742.68708	0.889409	0.001389	D	71	Grassland	80	0.11112
B-P6E	6631.692125	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	29057.0254	0.667057	0.001042	D	52	Desert Shrub	84	0.087528
B-P6E	143945.8472	3.304541	0.005163	D	71	Grassland	80	0.41304
B-P6E	92716.89023	2.128486	0.003325	D	52	Desert Shrub	84	0.2793
B-P6E	29057.02183	0.667057	0.001042	D	42	Evergreen Forest	77	0.080234
B-P6E	6202.510733	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	9499.811106	0.218085	0.00034	D	52	Desert Shrub	84	0.02856
B-P6E	30778.24114	0.706571	0.001104	D	71	Grassland	80	0.08832
B-P6E	9685.674948	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	46606.39895	1.069935	0.001671	D	71	Grassland	80	0.13368
B-P6E	6202.516273	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	9685.667984	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	21888.81942	0.502498	0.000785	D	71	Grassland	80	0.0628
B-P6E	1023.627675	0.023499	0.000036	D	71	Grassland	80	0.00288
B-P6E	6202.520714	0.14239	0.000222	D	52	Desert Shrub	84	0.018648
B-P6E	9685.674912	0.222352	0.000347	D	42	Evergreen Forest	77	0.026719
B-P6E	6202.520934	0.14239	0.000222	D	52	Desert Shrub	84	0.018648
B-P6E	6631.69723	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	6202.517809	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	41905.27969	0.962012	0.001503	D	52	Desert Shrub	84	0.126252
B-P6E	38616.98435	0.886523	0.001385	D	42	Evergreen Forest	77	0.106645
B-P6E	68779.18068	1.578952	0.002467	D	71	Grassland	80	0.19736
B-P6E	6631.690676	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	38211.84357	0.877223	0.00137	D	52	Desert Shrub	84	0.11508
B-P6E	19371.33978	0.444704	0.000694	D	71	Grassland	80	0.05552
B-P6E	10209.67468	0.234381	0.000366	D	52	Desert Shrub	84	0.030744
B-P6E	9685.664306	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	9685.676487	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	181065.8285	4.156699	0.006494	D	42	Evergreen Forest	77	0.500038
B-P6E	22944.34239	0.526729	0.000823	D	71	Grassland	80	0.06584
B-P6E	593.675933	0.013628	0.000021	D	52	Desert Shrub	84	0.001764
B-P6E	85373.8892	1.959914	0.003062	D	71	Grassland	80	0.24496
B-P6E	309980.8785	7.116181	0.011119	D	71	Grassland	80	0.88952
B-P6E	11366.03255	0.260928	0.000407	D	71	Grassland	80	0.03256
B-P6E	40287.29405	0.924869	0.001445	D	71	Grassland	80	0.1156
B-P6E	19992.08736	0.458955	0.000717	D	71	Grassland	80	0.05736
B-P6E	29204.27481	0.670437	0.001047	D	71	Grassland	80	0.08376
B-P6E	9685.675557	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	9685.675519	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	9685.67582	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	36110.11361	0.828974	0.001295	D	42	Evergreen Forest	77	0.099715
B-P6E	39993.27016	0.918119	0.001434	D	71	Grassland	80	0.11472
B-P6E	141132.2728	3.239951	0.005062	D	71	Grassland	80	0.40496
B-P6E	1469812.85	33.74226	0.052722	D	71	Grassland	80	4.21776
B-P6E	21838969.78	501.353759	0.783365	D	52	Desert Shrub	84	65.80266
B-P6E	36302.92862	0.8334	0.001302	D	71	Grassland	80	0.10416
B-P6E	19371.35006	0.444705	0.000694	D	71	Grassland	80	0.05552
B-P6E	6631.699459	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	38467.74632	0.883097	0.001379	D	71	Grassland	80	0.11032
B-P6E	43890.71474	1.007592	0.001574	D	71	Grassland	80	0.12592
B-P6E	8200.434806	0.188256	0.000294	D	71	Grassland	80	0.02352
B-P6E	44009.94634	1.010329	0.001578	D	71	Grassland	80	0.12624
B-P6E	9685.66557	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	6631.692862	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	13511.68574	0.310185	0.000484	D	71	Grassland	80	0.03872
B-P6E	38742.6522	0.889408	0.001389	D	71	Grassland	80	0.11112
B-P6E	6202.512627	0.14239	0.000222	D	71	Grassland	80	0.01776

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B-P6E	34433.59311	0.790486	0.001235	D	71	Grassland	80	0.0988
B-P6E	6631.691463	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	6631.690147	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	34433.61215	0.790486	0.001235	D	71	Grassland	80	0.0988
B-P6E	9335750.045	214.31933	0.334873	D	52	Desert Shrub	84	28.129332
B-P6E	236.386671	0.005426	0.000008	D	52	Desert Shrub	84	0.000672
B-P6E	13225.53625	0.303616	0.000474	D	71	Grassland	80	0.03792
B-P6E	214726.1156	4.929433	0.007702	D	71	Grassland	80	0.61616
B-P6E	5709.241161	0.131066	0.000204	D	71	Grassland	80	0.01632
B-P6E	9685.687302	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	21223.58986	0.487226	0.000761	D	71	Grassland	80	0.06088
B-P6E	6631.708723	0.152243	0.000237	D	71	Grassland	80	0.01896
B-P6E	13225.52661	0.303616	0.000474	D	52	Desert Shrub	84	0.039816
B-P6E	36815.28215	0.845162	0.00132	D	71	Grassland	80	0.1056
B-P6E	13226.18975	0.303631	0.000474	D	52	Desert Shrub	84	0.039816
B-P6E	9685.694262	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	21888.87878	0.502499	0.000785	D	71	Grassland	80	0.0628
B-P6E	6631.705794	0.152243	0.000237	D	71	Grassland	80	0.01896
B-P6E	13225.52298	0.303616	0.000474	D	52	Desert Shrub	84	0.039816
B-P6E	6631.702677	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	214739.286	4.929735	0.007702	D	52	Desert Shrub	84	0.646968
B-P6E	19371.36405	0.444705	0.000694	D	71	Grassland	80	0.05552
B-P6E	167752.7369	3.851072	0.006017	D	71	Grassland	80	0.48136
B-P6E	36394.61991	0.835505	0.001305	D	71	Grassland	80	0.1044
B-P6E	13072.88675	0.300112	0.000468	D	71	Grassland	80	0.03744
B-P6E	89230.73357	2.048455	0.0032	D	52	Desert Shrub	84	0.2688
B-P6E	97325.29497	2.234281	0.003491	D	52	Desert Shrub	84	0.293244
B-P6E	13511.72058	0.310186	0.000484	D	52	Desert Shrub	84	0.040656
B-P6E	6631.70875	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	13226.17965	0.303631	0.000474	D	52	Desert Shrub	84	0.039816
B-P6E	9685.692158	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	20252.2151	0.464926	0.000726	D	52	Desert Shrub	84	0.060984
B-P6E	19371.38182	0.444705	0.000694	D	52	Desert Shrub	84	0.058296
B-P6E	6631.70723	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	9685.691762	0.222352	0.000347	D	71	Grassland	80	0.02776
B-P6E	9685.691405	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	6202.525655	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	112702.2772	2.587288	0.004042	D	52	Desert Shrub	84	0.339528
B-P6E	6202.532373	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	102701.0359	2.357691	0.003683	D	52	Desert Shrub	84	0.309372
B-P6E	9685.688843	0.222352	0.000347	D	52	Desert Shrub	84	0.029148
B-P6E	539.354785	0.012381	0.000019	D	71	Grassland	80	0.00152
B-P6E	6631.708131	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	13225.52871	0.303616	0.000474	D	52	Desert Shrub	84	0.039816
B-P6E	163561.032	3.754844	0.005866	D	52	Desert Shrub	84	0.492744
B-P6E	6631.699772	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	78913.47119	1.811604	0.00283	D	52	Desert Shrub	84	0.23772
B-P6E	54213.74254	1.244576	0.001944	D	52	Desert Shrub	84	0.163296
B-P6E	6631.701574	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	6631.700637	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	6631.707261	0.152243	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	138472.3848	3.178888	0.004967	D	52	Desert Shrub	84	0.417228
B-P6E	19371.35782	0.444705	0.000694	D	71	Grassland	80	0.05552
B-P6E	6631.701496	0.152242	0.000237	D	52	Desert Shrub	84	0.019908
B-P6E	6631.701105	0.152242	0.000237	D	71	Grassland	80	0.01896
B-P6E	24928.35904	0.572276	0.000894	D	52	Desert Shrub	84	0.075096
B-P6E	5247.034682	0.120455	0.000188	D	71	Grassland	80	0.01504
B-P6E	137567.1992	3.158108	0.004934	D	52	Desert Shrub	84	0.414456
B-P6E	19413.40986	0.44567	0.000696	D	52	Desert Shrub	84	0.058464
B-P6E	13072.8797	0.300112	0.000468	D	71	Grassland	80	0.03744
B-P6E	6202.520121	0.14239	0.000222	D	71	Grassland	80	0.01776
B-P6E	5239.599997	0.120284	0.000187	D	71	Grassland	80	0.01496
B-P6E	13075.6118	0.300174	0.000469	D	52	Desert Shrub	84	0.039396

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B-P6E	9685.681487	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	9685.676368	0.222352	0.000347 D		71	Grassland	80	0.02776
B-P6E	9685.67603	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	8433.805126	0.193613	0.000302 D		71	Grassland	80	0.02416
B-P6E	6202.529373	0.14239	0.000222 D		52	Desert Shrub	84	0.018648
B-P6E	6202.529777	0.14239	0.000222 D		52	Desert Shrub	84	0.018648
B-P6E	35606.51194	0.817413	0.001277 D		52	Desert Shrub	84	0.107268
B-P6E	31707.47695	0.727903	0.001137 D		71	Grassland	80	0.09096
B-P6E	1219.410662	0.027993	0.000043 D		71	Grassland	80	0.00344
B-P6E	169728.118	3.896421	0.006088 D		52	Desert Shrub	84	0.511392
B-P6E	2552.96894	0.058608	0.000091 D		71	Grassland	80	0.00728
B-P6E	44010.06217	1.010332	0.001578 D		52	Desert Shrub	84	0.132552
B-P6E	9685.68929	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	6202.528075	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	32639.54345	0.7493	0.00117 D		52	Desert Shrub	84	0.09828
B-P6E	6202.522792	0.14239	0.000222 D		52	Desert Shrub	84	0.018648
B-P6E	19371.36037	0.444705	0.000694 D		71	Grassland	80	0.05552
B-P6E	75100.78364	1.724076	0.002693 D		52	Desert Shrub	84	0.226212
B-P6E	9685.683893	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	6202.526679	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	108203.929	2.48402	0.003881 D		52	Desert Shrub	84	0.326004
B-P6E	6202.527995	0.14239	0.000222 D		71	Grassland	80	0.01776
B-P6E	185051.6871	4.248202	0.006637 D		52	Desert Shrub	84	0.557508
B-P6E	6631.702722	0.152242	0.000237 D		52	Desert Shrub	84	0.019908
B-P6E	45830.51483	1.052123	0.001643 D		52	Desert Shrub	84	0.138012
B-P6E	120392.0439	2.763821	0.004318 D		52	Desert Shrub	84	0.362712
B-P6E	9685.679458	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	6631.702095	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	6631.702606	0.152242	0.000237 D		71	Grassland	80	0.01896
B-P6E	6454.225262	0.148168	0.000231 D		52	Desert Shrub	84	0.019404
B-P6E	9685.68344	0.222352	0.000347 D		52	Desert Shrub	84	0.029148
B-P6E	95531.48601	2.193101	0.003426 D		71	Grassland	80	0.27408
B-P6E	462548.346	10.618648	0.016591 D		52	Desert Shrub	84	1.393644
B-P6E	35058.59194	0.804834	0.001257 D		52	Desert Shrub	84	0.105588
B-P6E	6631.70253	0.152242	0.000237 D		52	Desert Shrub	84	0.019908
B-P6E	6956.378167	0.159696	0.000249 D		52	Desert Shrub	84	0.020916
B-P6E	250086.166	5.741188	0.00897 D		52	Desert Shrub	84	0.75348
B-P6E	6631.700041	0.152242	0.000237 D		52	Desert Shrub	84	0.019908
B-P6E	114163.1748	2.620825	0.004095 D		52	Desert Shrub	84	0.34398
B-P6E	62810.27066	1.441925	0.002253 D		42	Evergreen Forest	77	0.173481
B-P6E	19371.3574	0.444705	0.000694 D		52	Desert Shrub	84	0.058296
B-P6E	120.133461	0.002757	0.000004 D		71	Grassland	80	0.00032
B-P6E	7969.288053	0.182949	0.000285 D		71	Grassland	80	0.0228
B-P6E	151211.4232	3.471336	0.005423 D		71	Grassland	80	0.43384
B-P6E	70228.97134	1.612235	0.002519 D		42	Evergreen Forest	77	0.193963
B-P6E	44629.63775	1.024555	0.0016 D		42	Evergreen Forest	77	0.1232
B-P6E	49777.99957	1.142745	0.001785 D		71	Grassland	80	0.1428
B-P6E	14792118.2	339.580307	0.530594 D		71	Grassland	80	42.44752
B-P6E	8503100.946	195.204337	0.305006 D		52	Desert Shrub	84	25.620504
B-P6E	231855.3931	5.322667	0.008316 D		52	Desert Shrub	84	0.698544
B-P6E	324973.5662	7.460366	0.011656 D		21	Low Intensity Resid*	82	0.955792
B-P6E	620840.1422	14.252528	0.022269 D		52	Desert Shrub	84	1.870596
B-P6E	1871.024343	0.042952	0.000067 B		52	Desert Shrub	68	0.004556
B-P6E	13225.42216	0.303613	0.000474 B		24	Industrial	88	0.041712
B-P6E	19183.6172	0.440395	0.000688 B		22	High Intensity Resi*	70	0.04816
B-P6E	9685.617264	0.222351	0.000347 B		24	Industrial	88	0.030536
B-P6E	139032.6078	3.191749	0.004987 B		24	Industrial	88	0.438856
B-P6E	151430.0296	3.476355	0.005431 B		23	Commercial	92	0.499652
B-P6E	9685.616986	0.222351	0.000347 B		24	Industrial	88	0.030536
B-P6E	72566.45882	1.665896	0.002602 B		23	Commercial	92	0.239384
B-P6E	9685.615733	0.222351	0.000347 B		22	High Intensity Resi*	70	0.02429
B-P6E	67799.40188	1.55646	0.002431 B		22	High Intensity Resi*	70	0.17017
B-P6E	9685.615457	0.222351	0.000347 B		22	High Intensity Resi*	70	0.02429

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B-P6E	7240.886769	0.166227	0.000259	B	22	High Intensity Resi*	70	0.01813
B-P6E	9685.614659	0.222351	0.000347	B	23	Commercial	92	0.031924
B-P6E	9685.614632	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6E	43218.73802	0.992165	0.00155	B	22	High Intensity Resi*	70	0.1085
B-P6E	14904.14588	0.342152	0.000534	B	52	Desert Shrub	68	0.036312
B-P6E	5629.449003	0.129234	0.000201	B	31	Bare Rock/Sand/Clay	86	0.017286
B-P6E	6202.481555	0.142389	0.000222	B	23	Commercial	92	0.020424
B-P6E	51911.2062	1.191717	0.001862	B	52	Desert Shrub	68	0.126616
B-P6E	9685.613811	0.222351	0.000347	B	22	High Intensity Resi*	70	0.02429
B-P6E	35154.09182	0.807026	0.00126	B	52	Desert Shrub	68	0.08568
B-P6E	343467.3172	7.884924	0.01232	B	23	Commercial	92	1.13344
B-P6E	6631.655459	0.152241	0.000237	B	22	High Intensity Resi*	70	0.01659
B-P6E	430.368142	0.009879	0.000015	B	71	Grassland	61	0.000915
B-P6E	186427.5924	4.279788	0.006687	B	22	High Intensity Resi*	70	0.46809
B-P6E	19371.2293	0.444702	0.000694	B	52	Desert Shrub	68	0.047192
B-P6E	19371.22831	0.444702	0.000694	B	22	High Intensity Resi*	70	0.04858
B-P6E	9685.613785	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6E	125913.1168	2.890567	0.004516	B	22	High Intensity Resi*	70	0.31612
B-P6E	569175.07	13.066461	0.020416	B	11	Open Water	98	2.000768
B-P6E	2924500.949	67.137303	0.104902	B	52	Desert Shrub	68	7.133336
B-P6E	39911.17686	0.916234	0.001431	B	21	Low Intensity Resid*	65	0.093015
B-P6E	337447.7928	7.746735	0.012104	B	52	Desert Shrub	68	0.823072
B-P6E	4100.426166	0.094132	0.000147	D	71	Grassland	80	0.01176
B-P6E	13225.45524	0.303614	0.000474	D	82	Row Crops	94	0.044556
B-P6E	22944.88168	0.526742	0.000823	D	82	Row Crops	94	0.077362
B-P6E	24301193.74	557.878644	0.871685	D	52	Desert Shrub	84	73.22154
B-P6E	27081.62916	0.621708	0.000971	B	71	Grassland	61	0.059231
B-P6E	647.605237	0.014866	0.000023	B	71	Grassland	61	0.001403
B-P6E	82797.06236	1.900759	0.002969	B	31	Bare Rock/Sand/Clay	86	0.255334
B-P6E	49311.21089	1.132029	0.001768	B	52	Desert Shrub	68	0.120224
B-P6E	24749.78851	0.568176	0.000887	B	52	Desert Shrub	68	0.060316
B-P6E	6918.832177	0.158834	0.000248	D	52	Desert Shrub	84	0.020832
B-P6E	3.317794	0.000076	1.19E-07	D	52	Desert Shrub	84	9.9968E-06
B-P6E	144.675426	0.003321	0.000005	D	52	Desert Shrub	84	0.00042
B-P6E	1.762691	0.00004	6.32E-08	D	52	Desert Shrub	84	5.31114E-06
B-P6E	39.925731	0.000916	0.000001	D	21	Low Intensity Resid*	82	0.000082
B-P6E	1055.402416	0.024228	0.000037	D	52	Desert Shrub	84	0.003108
B-P6E	2384752.725	54.746389	0.085541	D	52	Desert Shrub	84	7.185444
B-P6E	232657.4764	5.34108	0.008345	D	21	Low Intensity Resid*	82	0.68429
B-P6E	3961924.794	90.953278	0.142114	D	52	Desert Shrub	84	11.937576
B-P6E	656.212146	0.015064	0.000023	B	52	Desert Shrub	68	0.001564
B-P6E	6631.650361	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6E	13225.40613	0.303613	0.000474	B	52	Desert Shrub	68	0.032232
B-P6E	19911.31095	0.4571	0.000714	B	52	Desert Shrub	68	0.048552
B-P6E	43064.80399	0.988631	0.001544	B	52	Desert Shrub	68	0.104992
B-P6E	6631.648802	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6E	6631.648068	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6E	51197.65992	1.175336	0.001836	B	82	Row Crops	86	0.157896
B-P6E	8328.125114	0.191187	0.000298	B	82	Row Crops	86	0.025628
B-P6E	6631.648188	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6E	62029.04994	1.423991	0.002224	B	71	Grassland	61	0.135664
B-P6E	193729.992	4.447428	0.006949	B	52	Desert Shrub	68	0.472532
B-P6E	30116.1946	0.691372	0.00108	B	82	Row Crops	86	0.09288
B-P6E	278595.4669	6.395671	0.009993	B	71	Grassland	61	0.609573
B-P6E	6451.451431	0.148104	0.000231	B	71	Grassland	61	0.014091
B-P6E	447601.9948	10.275527	0.016055	B	52	Desert Shrub	68	1.09174
B-P6E	1915688.934	43.978166	0.068715	B	82	Row Crops	86	5.90949
B-P6E	9037.995361	0.207483	0.000324	B	71	Grassland	61	0.019764
B-P6E	93492.02707	2.146281	0.003353	B	31	Bare Rock/Sand/Clay	86	0.288358
B-P6E	9685.615371	0.222351	0.000347	B	23	Commercial	92	0.031924
B-P6E	892586.9076	20.490975	0.032017	B	52	Desert Shrub	68	2.177156
B-P6E	9685.600771	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6E	43968.13109	1.009369	0.001577	B	71	Grassland	61	0.096197

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B-P6E	9685.607135	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	71614.80124	1.644049	0.002568	B	52	Desert Shrub	68	0.174624
B-P6E	4331.458552	0.099436	0.000155	B	52	Desert Shrub	68	0.01054
B-P6E	180633.4534	4.146773	0.006479	B	82	Row Crops	86	0.557194
B-P6E	6631.654312	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-P6E	9685.606876	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	32727.59162	0.751322	0.001173	B	22	High Intensity Resi*	70	0.08211
B-P6E	9685.611125	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-P6E	60836.2626	1.396608	0.002182	B	71	Grassland	61	0.133102
B-P6E	9685.606617	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	1484.497496	0.034079	0.000053	B	24	Industrial	88	0.004664
B-P6E	9685.606359	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	9685.606127	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6E	9685.606101	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	71200.64791	1.634541	0.002553	B	82	Row Crops	86	0.219558
B-P6E	6202.479727	0.142389	0.000222	B	22	High Intensity Resi*	70	0.01554
B-P6E	109627.6095	2.516703	0.003932	B	23	Commercial	92	0.361744
B-P6E	109618.9368	2.516504	0.003932	B	22	High Intensity Resi*	70	0.27524
B-P6E	43686.10469	1.002894	0.001567	B	71	Grassland	61	0.095587
B-P6E	9685.605843	0.22235	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6E	211952.5131	4.86576	0.007602	B	71	Grassland	61	0.463722
B-P6E	176946.7724	4.062138	0.006347	B	22	High Intensity Resi*	70	0.44429
B-P6E	19371.22282	0.444702	0.000694	B	23	Commercial	92	0.063848
B-P6E	52895.15285	1.214305	0.001897	B	52	Desert Shrub	68	0.128996
B-P6E	121444.5437	2.787983	0.004356	B	31	Bare Rock/Sand/Clay	86	0.374616
B-P6E	9685.611883	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6E	9685.61164	0.222351	0.000347	B	71	Grassland	61	0.021167
B-P6E	109842.6917	2.521641	0.00394	B	23	Commercial	92	0.36248
B-P6E	26024.17692	0.597432	0.000933	B	71	Grassland	61	0.056913
B-P6E	72958.38678	1.674894	0.002617	B	71	Grassland	61	0.159637
B-P6E	432934.835	9.938816	0.015529	B	11	Open Water	98	1.521842
B-P6E	266862.9572	6.12633	0.009572	B	21	Low Intensity Resid*	65	0.62218
B-P6E	3875428.147	88.967588	0.139011	B	52	Desert Shrub	68	9.452748
B-P6E	5572553.482	127.928225	0.199887	B	52	Desert Shrub	68	13.592316
B-P6E	1251769.793	28.73668	0.044901	B	21	Low Intensity Resid*	65	2.918565
B-P6E	491.220011	0.011276	0.000017	B	71	Grassland	61	0.001037
B-P6E	3081.974489	0.070752	0.00011	B	52	Desert Shrub	68	0.00748
B-P6E	83.599074	0.001919	0.000002	B	21	Low Intensity Resid*	65	0.00013
B-P6E	0.08384	0.000001	3.01E-09	B	52	Desert Shrub	68	2.045E-07
B-P6E	89.839412	0.002062	0.000003	B	82	Row Crops	86	0.000258
B-P6E	2884.348356	0.066215	0.000103	B	82	Row Crops	86	0.008858
B-P6E	9307.577998	0.213672	0.000333	B	52	Desert Shrub	68	0.022644
B-P6E	1124.530304	0.025815	0.00004	B	82	Row Crops	86	0.00344
B-P6E	125.385853	0.002878	0.000004	B	82	Row Crops	86	0.000344
B-P6E	9610.119068	0.220617	0.000344	B	52	Desert Shrub	68	0.023392
Sum =		6.01865032			Sum =	484.5162643		
CN(II) =		80.50			CN(III) =	90.47		

B-P6D	1.0562	0.000024	3.79E-08	B	21	Low Intensity Resid*	65	2.46259E-06
B-P6D	3156.012767	0.072452	0.000113	B	52	Desert Shrub	68	0.007684
B-P6D	388.835505	0.008926	0.000013	B	21	Low Intensity Resid*	65	0.000845
B-P6D	9555.383735	0.219361	0.000342	B	71	Grassland	61	0.020862
B-P6D	25320.92952	0.581288	0.000908	B	52	Desert Shrub	68	0.061744
B-P6D	865.270747	0.019863	0.000031	B	82	Row Crops	86	0.002666
B-P6D	27316.89846	0.627109	0.000979	B	52	Desert Shrub	68	0.066572
B-P6D	35362.71703	0.811816	0.001268	B	21	Low Intensity Resid*	65	0.08242
B-P6D	57750.52448	1.325769	0.002071	B	21	Low Intensity Resid*	65	0.134615
B-P6D	41083.48724	0.943147	0.001473	B	71	Grassland	61	0.089853
B-P6D	109426.9487	2.512097	0.003925	B	71	Grassland	61	0.239425
B-P6D	16908.05808	0.388155	0.000606	B	21	Low Intensity Resid*	65	0.03939
B-P6D	970.842103	0.022287	0.000034	B	82	Row Crops	86	0.002924

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P6D	9685.6116	0.222351	0.000347	B	71	Grassland	61	0.021167
B-P6D	38208.02899	0.877135	0.00137	B	82	Row Crops	86	0.11782
B-P6D	3010.136118	0.069103	0.000107	B	52	Desert Shrub	68	0.007276
B-P6D	6202.481548	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6D	33895.15541	0.778125	0.001215	B	71	Grassland	61	0.074115
B-P6D	13513.98522	0.310238	0.000484	B	82	Row Crops	86	0.041624
B-P6D	90038.85067	2.067007	0.003229	B	82	Row Crops	86	0.277694
B-P6D	9685.614457	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-P6D	434255.07	9.969124	0.015576	B	82	Row Crops	86	1.339536
B-P6D	6631.657989	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-P6D	110384.0005	2.534067	0.003959	B	21	Low Intensity Resid*	65	0.257335
B-P6D	9685.619148	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	6202.475996	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6D	38742.48131	0.889404	0.001389	B	82	Row Crops	86	0.119454
B-P6D	48428.10534	1.111756	0.001737	B	52	Desert Shrub	68	0.118116
B-P6D	9685.618866	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	35602.27936	0.817315	0.001277	B	71	Grassland	61	0.077897
B-P6D	6202.478708	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6D	9685.618583	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	9685.613094	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-P6D	9685.612849	0.222351	0.000347	B	71	Grassland	61	0.021167
B-P6D	52408.02766	1.203122	0.001879	B	82	Row Crops	86	0.161594
B-P6D	58113.71601	1.334107	0.002084	B	82	Row Crops	86	0.179224
B-P6D	9685.618303	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	13072.78595	0.300109	0.000468	B	82	Row Crops	86	0.040248
B-P6D	9685.61802	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	561177.9358	12.882872	0.020129	B	71	Grassland	61	1.227869
B-P6D	19371.2266	0.444702	0.000694	B	82	Row Crops	86	0.059684
B-P6D	9685.617741	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	6631.658199	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6D	9685.61746	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	9685.61921	0.222351	0.000347	B	82	Row Crops	86	0.029842
B-P6D	6631.655716	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6D	65853.13576	1.511779	0.002362	B	82	Row Crops	86	0.203132
B-P6D	54795.45853	1.25793	0.001965	B	71	Grassland	61	0.119865
B-P6D	181.343477	0.004163	0.000006	B	71	Grassland	61	0.000366
B-P6D	19413.30189	0.445668	0.000696	B	82	Row Crops	86	0.059856
B-P6D	10323.85654	0.237003	0.00037	B	71	Grassland	61	0.02257
B-P6D	6631.654635	0.152241	0.000237	B	82	Row Crops	86	0.020382
B-P6D	34634.53884	0.795099	0.001242	B	82	Row Crops	86	0.106812
B-P6D	6202.480758	0.142389	0.000222	B	82	Row Crops	86	0.019092
B-P6D	19245.8851	0.441824	0.00069	B	71	Grassland	61	0.04209
B-P6D	51863.41329	1.19062	0.00186	B	82	Row Crops	86	0.15996
B-P6D	118227.892	2.714138	0.00424	B	21	Low Intensity Resid*	65	0.2756
B-P6D	9685.615212	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	9685.614937	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	9685.614663	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	9685.614636	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6D	9685.614389	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	6202.477669	0.142389	0.000222	B	82	Row Crops	86	0.019092
B-P6D	20248.51688	0.464841	0.000726	B	71	Grassland	61	0.044286
B-P6D	9685.614361	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6D	9685.614114	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6D	6169.79554	0.141639	0.000221	B	21	Low Intensity Resid*	65	0.014365
B-P6D	9631.482243	0.221108	0.000345	B	82	Row Crops	86	0.02967
B-P6D	6202.481245	0.142389	0.000222	B	52	Desert Shrub	68	0.015096
B-P6D	242.257309	0.005561	0.000008	B	52	Desert Shrub	68	0.000544
B-P6D	16190.77529	0.371689	0.00058	B	52	Desert Shrub	68	0.03944
B-P6D	11021.03833	0.253008	0.000395	B	71	Grassland	61	0.024095
B-P6D	274.298912	0.006297	0.000009	B	71	Grassland	61	0.000549
B-P6D	9684390.173	222.323006	0.347379	B	52	Desert Shrub	68	23.621772
B-P6D	1456908.862	33.446025	0.052259	B	82	Row Crops	86	4.494274
B-P6D	2650253.756	60.841454	0.095064	B	52	Desert Shrub	68	6.464352

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P6D	1509465.942	34.652569	0.054144	B	82	Row Crops	86	4.656384
B-P6D	13111.55205	0.300999	0.00047	B	21	Low Intensity Resid*	65	0.03055
B-P6D	3642.312833	0.083615	0.00013	B	52	Desert Shrub	68	0.00884
B-P6D	2024257.855	46.470566	0.07261	B	52	Desert Shrub	68	4.93748
B-P6D	319058.1575	7.324567	0.011444	B	21	Low Intensity Resid*	65	0.74386
B-P6D	1894544.486	43.492756	0.067957	B	52	Desert Shrub	68	4.621076
B-P6D	594020.5399	13.636835	0.021307	D	52	Desert Shrub	84	1.789788
B-P6D	2656.177051	0.060977	0.000095	D	52	Desert Shrub	84	0.00798
B-P6D	308.69433	0.007086	0.000011	B	21	Low Intensity Resid*	65	0.000715
B-P6D	170.261857	0.003908	0.000006	B	52	Desert Shrub	68	0.000408
B-P6D	4040.148895	0.092749	0.000144	B	52	Desert Shrub	68	0.009792
B-P6D	1987.238313	0.04562	0.000071	B	21	Low Intensity Resid*	65	0.004615
B-P6D	2503.010756	0.057461	0.000089	B	71	Grassland	61	0.005429
B-P6D	20.349684	0.000467	7.30E-07	B	71	Grassland	61	4.45266E-05
B-P6D	1065.266525	0.024455	0.000038	B	52	Desert Shrub	68	0.002584
B-P6D	727.720178	0.016706	0.000026	B	82	Row Crops	86	0.002236
B-P6D	16593.96916	0.380945	0.000595	B	52	Desert Shrub	68	0.04046
B-P6D	1506.69643	0.034588	0.000054	B	82	Row Crops	86	0.004644
B-P6D	1841.388833	0.042272	0.000066	B	52	Desert Shrub	68	0.004488
B-P6D	11.493884	0.000263	4.12E-07	B	52	Desert Shrub	68	2.80355E-05
Sum =		8.16E-01			Sum =		58.05678402	

CN(II) =	71.16	CN(III) =	85.02
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B-P6B	34232.69819	0.785874	0.001227	B	21	Low Intensity Resid*	65	0.079755
B-P6B	19.007706	0.000436	6.82E-07	B	82	Row Crops	86	5.86355E-05
B-P6B	22786.48951	0.523105	0.000817	B	71	Grassland	61	0.049837
B-P6B	21886.73743	0.50245	0.000785	B	71	Grassland	61	0.047885
B-P6B	13.064842	0.000299	4.69E-07	B	71	Grassland	61	2.85868E-05
B-P6B	11723.63963	0.269137	0.00042	B	71	Grassland	61	0.02562
B-P6B	6441.319159	0.147872	0.000231	B	71	Grassland	61	0.014091
B-P6B	104429.3158	2.397367	0.003745	B	52	Desert Shrub	68	0.25466
B-P6B	347747.4748	7.983183	0.012473	B	82	Row Crops	86	1.072678
B-P6B	8829.260338	0.202691	0.000316	B	21	Low Intensity Resid*	65	0.02054
B-P6B	2577.289122	0.059166	0.000092	B	52	Desert Shrub	68	0.006256
B-P6B	16686.60761	0.383071	0.000598	B	71	Grassland	61	0.036478
B-P6B	10102.9432	0.231931	0.000362	B	71	Grassland	61	0.022082
B-P6B	26013.45487	0.597186	0.000933	B	71	Grassland	61	0.056913
B-P6B	5822.358053	0.133662	0.000208	B	71	Grassland	61	0.012688
B-P6B	6202.475085	0.142389	0.000222	B	71	Grassland	61	0.013542
B-P6B	14782.08147	0.339349	0.00053	B	71	Grassland	61	0.03233
B-P6B	6184.335515	0.141972	0.000221	B	71	Grassland	61	0.013481
B-P6B	250.633722	0.005753	0.000008	B	71	Grassland	61	0.000488
B-P6B	3649.767694	0.083787	0.00013	B	71	Grassland	61	0.00793
B-P6B	7105.169722	0.163112	0.000254	B	52	Desert Shrub	68	0.017272
B-P6B	6631.649122	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6B	13945.51362	0.320144	0.0005	B	52	Desert Shrub	68	0.034
B-P6B	9685.60039	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6B	21811.33781	0.500719	0.000782	B	71	Grassland	61	0.047702
B-P6B	9685.600144	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6B	115970.9701	2.662327	0.004159	B	71	Grassland	61	0.253699
B-P6B	46245.43291	1.061649	0.001658	B	52	Desert Shrub	68	0.112744
B-P6B	218064.5488	5.006073	0.007821	B	52	Desert Shrub	68	0.531828
B-P6B	3076.803935	0.070633	0.00011	B	52	Desert Shrub	68	0.00748
B-P6B	6631.647233	0.152241	0.000237	B	52	Desert Shrub	68	0.016116
B-P6B	52084.85351	1.195703	0.001868	B	52	Desert Shrub	68	0.127024
B-P6B	1790389.101	41.101678	0.064221	B	82	Row Crops	86	5.523006
B-P6B	712222.8415	16.350386	0.025547	B	31	Bare Rock/Sand/Clay	86	2.197042
B-P6B	33104.0556	0.759964	0.001187	B	52	Desert Shrub	68	0.080716
B-P6B	284.962796	0.006541	0.00001	B	31	Bare Rock/Sand/Clay	86	0.00086
B-P6B	9685.598244	0.22235	0.000347	B	82	Row Crops	86	0.029842
B-P6B	19095.78111	0.438378	0.000684	B	31	Bare Rock/Sand/Clay	86	0.058824

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Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P6B	46614.18553	1.070114	0.001672 B		82	Row Crops	86	0.143792
B-P6B	53154.02392	1.220248	0.001906 B		52	Desert Shrub	68	0.129608
B-P6B	37261.12709	0.855397	0.001336 B		21	Low Intensity Resid*	65	0.08684
B-P6B	77697.81088	1.783696	0.002787 B		71	Grassland	61	0.170007
B-P6B	3109.160088	0.071376	0.000111 B		52	Desert Shrub	68	0.007548
B-P6B	29056.79497	0.667052	0.001042 B		71	Grassland	61	0.063562
B-P6B	29056.79322	0.667052	0.001042 B		31	Bare Rock/Sand/Clay	86	0.089612
B-P6B	9685.597284	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-P6B	9685.598248	0.22235	0.000347 B		82	Row Crops	86	0.029842
B-P6B	38742.39475	0.889403	0.001389 B		52	Desert Shrub	68	0.094452
B-P6B	29056.79043	0.667052	0.001042 B		82	Row Crops	86	0.089612
B-P6B	63377.29805	1.454942	0.002273 B		52	Desert Shrub	68	0.154564
B-P6B	19371.19474	0.444701	0.000694 B		82	Row Crops	86	0.059684
B-P6B	79149.45692	1.817021	0.002839 B		71	Grassland	61	0.173179
B-P6B	6631.646013	0.152241	0.000237 B		52	Desert Shrub	68	0.016116
B-P6B	38742.39944	0.889403	0.001389 B		71	Grassland	61	0.084729
B-P6B	9685.598178	0.22235	0.000347 B		31	Bare Rock/Sand/Clay	86	0.029842
B-P6B	29056.79183	0.667052	0.001042 B		52	Desert Shrub	68	0.070856
B-P6B	9685.597744	0.22235	0.000347 B		71	Grassland	61	0.021167
B-P6B	9685.597529	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-P6B	72745.67221	1.67001	0.002609 B		52	Desert Shrub	68	0.177412
B-P6B	25727.37088	0.590619	0.000922 B		71	Grassland	61	0.056242
B-P6B	19371.19542	0.444701	0.000694 B		52	Desert Shrub	68	0.047192
B-P6B	19371.19451	0.444701	0.000694 B		52	Desert Shrub	68	0.047192
B-P6B	38742.38641	0.889402	0.001389 B		31	Bare Rock/Sand/Clay	86	0.119454
B-P6B	48152.31724	1.105425	0.001727 B		71	Grassland	61	0.105347
B-P6B	9685.596981	0.22235	0.000347 B		71	Grassland	61	0.021167
B-P6B	611665.7382	14.041913	0.02194 B		31	Bare Rock/Sand/Clay	86	1.88684
B-P6B	577.373235	0.013254	0.00002 B		71	Grassland	61	0.00122
B-P6B	197397.6029	4.531625	0.00708 B		21	Low Intensity Resid*	65	0.4602
B-P6B	130696.9149	3.000388	0.004688 B		52	Desert Shrub	68	0.318784
B-P6B	410335.0176	9.419995	0.014718 B		31	Bare Rock/Sand/Clay	86	1.265748
B-P6B	47138.58382	1.082152	0.00169 B		52	Desert Shrub	68	0.11492
B-P6B	36602.36138	0.840274	0.001312 B		52	Desert Shrub	68	0.089216
B-P6B	8.116801	0.000186	2.91E-07 B		31	Bare Rock/Sand/Clay	86	2.50389E-05
B-P6B	19371.19606	0.444701	0.000694 B		71	Grassland	61	0.042334
B-P6B	9685.598837	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-P6B	32828.52141	0.753639	0.001177 B		71	Grassland	61	0.071797
B-P6B	446661.2754	10.253931	0.016021 B		31	Bare Rock/Sand/Clay	86	1.377806
B-P6B	238410.6033	5.473154	0.008551 B		52	Desert Shrub	68	0.581468
B-P6B	9468.487878	0.217366	0.000339 B		71	Grassland	61	0.020679
B-P6B	0.056615	0.000001	2.03E-09 B		21	Low Intensity Resid*	65	1.32001E-07
B-P6B	16.508512	0.000378	5.92E-07 B		52	Desert Shrub	68	4.0267E-05
B-P6B	240.39127	0.005518	0.000008 B		31	Bare Rock/Sand/Clay	86	0.000688
B-P6B	614.144672	0.014098	0.000022 B		31	Bare Rock/Sand/Clay	86	0.001892
B-P6B	5999.953666	0.137739	0.000215 B		21	Low Intensity Resid*	65	0.013975
B-P6B	74184.67623	1.703045	0.002661 B		52	Desert Shrub	68	0.180948
B-P6B	33604.80158	0.77146	0.001205 B		71	Grassland	61	0.073505
B-P6B	2709.997961	0.062212	0.000097 B		21	Low Intensity Resid*	65	0.006305
B-P6B	2128.066389	0.048853	0.000076 B		52	Desert Shrub	68	0.005168
Sum =		0.247415036			Sum =	19.53565166		
CN(II) =		78.96			CN(III) =	89.62		

B-P6C	14856.89913	0.341067	0.000532 B		21	Low Intensity Resid*	65	0.03458
B-P6C	171.117611	0.003928	0.000006 B		82	Row Crops	86	0.000516
B-P6C	9685.605218	0.22235	0.000347 B		52	Desert Shrub	68	0.023596
B-P6C	3910.87419	0.089781	0.00014 B		71	Grassland	61	0.00854
B-P6C	12519.90391	0.287417	0.000449 B		71	Grassland	61	0.027389
B-P6C	17151.83211	0.393751	0.000615 B		71	Grassland	61	0.037515
B-P6C	933.058004	0.02142	0.000033 B		71	Grassland	61	0.002013
B-P6C	6202.476529	0.142389	0.000222 B		71	Grassland	61	0.013542

Chaparral Drainage Master Plan
Curve Number Computation

Basin Name	Shape_Area	Area_Acre	Area_SqMi	SoilType	GRIDC	LandUse	CN	CN*A
B-P6C	749.964683	0.017216	0.000026	B	71	Grassland	61	0.001586
B-P6C	1528.579987	0.035091	0.000054	B	21	Low Intensity Resid*	65	0.00351
B-P6C	9685.613569	0.222351	0.000347	B	21	Low Intensity Resid*	65	0.022555
B-P6C	9656.119768	0.221674	0.000346	B	82	Row Crops	86	0.029756
B-P6C	8763.072862	0.201172	0.000314	B	52	Desert Shrub	68	0.021352
B-P6C	9685.613052	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6C	6631.65836	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6C	9685.612972	0.222351	0.000347	B	52	Desert Shrub	68	0.023596
B-P6C	247788.7548	5.688447	0.008888	B	71	Grassland	61	0.542168
B-P6C	6202.48274	0.142389	0.000222	B	52	Desert Shrub	68	0.015096
B-P6C	6631.652232	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6C	15896.10171	0.364924	0.00057	B	71	Grassland	61	0.03477
B-P6C	107581.3192	2.469727	0.003858	B	52	Desert Shrub	68	0.262344
B-P6C	9685.608352	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6C	9685.608116	0.22235	0.000347	B	82	Row Crops	86	0.029842
B-P6C	33429.17322	0.767428	0.001199	B	71	Grassland	61	0.073139
B-P6C	112250.9831	2.576927	0.004026	B	21	Low Intensity Resid*	65	0.26169
B-P6C	11256.91672	0.258423	0.000403	B	71	Grassland	61	0.024583
B-P6C	9685.607149	0.22235	0.000347	B	52	Desert Shrub	68	0.023596
B-P6C	9685.607124	0.22235	0.000347	B	71	Grassland	61	0.021167
B-P6C	6631.651676	0.152241	0.000237	B	71	Grassland	61	0.014457
B-P6C	5323.028885	0.122199	0.00019	B	71	Grassland	61	0.01159
B-P6C	40967.60694	0.940486	0.001469	B	52	Desert Shrub	68	0.099892
B-P6C	287858.5217	6.608322	0.010325	B	52	Desert Shrub	68	0.7021
B-P6C	1187107.935	27.252248	0.042581	B	82	Row Crops	86	3.661966
B-P6C	131298.0229	3.014187	0.004709	B	82	Row Crops	86	0.404974
B-P6C	1051621.28	24.141902	0.037721	B	52	Desert Shrub	68	2.565028
B-P6C	1826.59806	0.041932	0.000065	B	71	Grassland	61	0.003965
B-P6C	665320.3568	15.273653	0.023865	B	82	Row Crops	86	2.05239
B-P6C	131541.3962	3.019774	0.004718	B	82	Row Crops	86	0.405748
B-P6C	142930.3094	3.281228	0.005126	B	52	Desert Shrub	68	0.348568
B-P6C	424.652258	0.009748	0.000015	B	52	Desert Shrub	68	0.00102
B-P6C	491.220011	0.011276	0.000017	B	71	Grassland	61	0.001037
B-P6C	3081.974489	0.070752	0.00011	B	52	Desert Shrub	68	0.00748
B-P6C	83.599074	0.001919	0.000002	B	21	Low Intensity Resid*	65	0.00013
B-P6C	0.08384	0.000001	3.01E-09	B	52	Desert Shrub	68	2.045E-07
B-P6C	89.839412	0.002062	0.000003	B	82	Row Crops	86	0.000258
B-P6C	2884.348356	0.066215	0.000103	B	82	Row Crops	86	0.008858
B-P6C	9307.577998	0.213672	0.000333	B	52	Desert Shrub	68	0.022644
B-P6C	1124.530304	0.025815	0.00004	B	82	Row Crops	86	0.00344
B-P6C	125.385853	0.002878	0.000004	B	82	Row Crops	86	0.000344
B-P6C	9610.119068	0.220617	0.000344	B	52	Desert Shrub	68	0.023392
B-P6C	1987.238313	0.04562	0.000071	B	21	Low Intensity Resid*	65	0.004615
B-P6C	2503.010756	0.057461	0.000089	B	71	Grassland	61	0.005429
B-P6C	20.349684	0.000467	7.30E-07	B	71	Grassland	61	4.45266E-05
B-P6C	1065.266525	0.024455	0.000038	B	52	Desert Shrub	68	0.002584
B-P6C	727.720178	0.016706	0.000026	B	82	Row Crops	86	0.002236
B-P6C	16593.96916	0.380945	0.000595	B	52	Desert Shrub	68	0.04046
B-P6C	1506.69643	0.034588	0.000054	B	82	Row Crops	86	0.004644
B-P6C	1841.388833	0.042272	0.000066	B	52	Desert Shrub	68	0.004488
B-P6C	11.493884	0.000263	4.12E-07	B	52	Desert Shrub	68	2.80355E-05
Sum =				0.158070145	Sum =			
CN(II) =				76.02	CN(III) =			
 					 			
 					 			
 					 			

Chaparral Drainage Master Plan
Lag Time

System	Basin	Area (sq mi.)	Area (acres)	Length to Divide (ft)	U/S elev	D/S Elev	Avg Slope	Lag Time		
					(ft)	(ft)	(%)	CN III	S (III)	(Arc III) (min)
Playa 1	B-P1A	4.78	3056.35	11936	4138	4054	0.70	83	2	150
	B-P1B	4.28	2739.30	13942	4121	4079	0.30	83	2	260
	B-P1C	0.61	392.24	5270	4212	4119	1.76	80	3	55
	B-P1D	0.53	342.33	6875	4216	4136	1.16	82	2	76
Miami	B-MIA	0.10	63.73	3434	4097	4062	1.02	83	2	47
	B-MIB	0.83	530.84	10988	4190	4070	1.09	82	2	116
	B-MIC	0.25	161.55	6982	4134	4069	0.93	82	2	87
	B-MID	6.60	4222.24	27463	5040	4124	3.34	90	1	106
Shiprock	B-SHA	2.42	1550.47	9963	4144	4054	0.90	83	2	115
	B-SHB	0.56	358.49	6757	4231	4144	1.29	84	2	69
	B-SHC	0.66	424.92	10345	4254	4143	1.07	83	2	107
Lisa	B-LIA	1.41	899.31	13798	4140	4031	0.79	83	2	157
	B-LIB	0.66	424.71	14466	5120	4142	6.76	88	1	47
	B-LIC	0.60	381.99	10003	4366	4142	2.24	87	2	64
	B-LID	5.55	3552.83	23583	4520	4142	1.60	91	1	127
Quirke Lake	B-QLA	4.70	3006.94	15137	4120	4022	0.65	83	2	186
	B-QLB	0.95	608.95	14837	5190	4140	7.08	88	1	47
	B-QLC	1.50	958.08	15004	5180	4131	6.99	92	1	41
	B-QLD	0.40	259.17	8532	4420	4128	3.42	90	1	40
	B-QUE	0.73	467.75	14738	4455	4047	2.77	89	1	72
Edna	B-EDA	0.63	403.97	10816	4120	4033	0.80	83	2	129
	B-EDB	0.99	633.20	12729	4131	4034	0.76	83	2	152
	B-EDC	1.29	825.57	10592	4126	4034	0.87	83	2	123
	B-EDD	1.19	760.19	10352	4097	4058	0.38	83	2	183
	B-EDE	2.79	1782.41	22126	4106	4048	0.26	83	2	403
McCombs	B-MCA	1.13	721.46	11820	4090	4018	0.61	83	2	160
Amparo	B-AMA	1.19	759.78	8974	4072	4026	0.51	83	2	141
	B-AMB	0.94	604.58	11812	4072	4038	0.29	83	2	233
	B-AMC	1.12	719.01	11152	4110	4038	0.65	83	2	149
	B-AMD	2.45	1568.56	12155	4091	4078	0.11	84	2	380
Prescott Anthony	B-PAA	0.64	411.07	10122	4092	4058	0.34	83	2	190
Playa 6	B-P6A	2.40	1538.01	11398	4070	4008	0.54	84	2	159
	B-P6B	0.25	158.35	2700	4060	4032	1.04	90	1	30
	B-P6C	0.16	101.16	9160	4140	4034	1.16	88	1	79
	B-P6D	0.82	522.18	11741	4260	4035	1.92	85	2	84
	B-P6E	6.02	3851.94	38094	5640	4036	4.21	90	1	118

HEC-HMS Result Summary

Chaparral Master Drainage Plan
HEC-HMS Results Summary

Hydrologic Element	Drainage Area (sq. mi.)	Peak Discharge (cfs)	Time of Peak	Volume (ac-ft)	Area (acres)	Proposed System
B-AMA	1.19	391.4	09Sep2020, 20:25	128	761.6	Amparo
B-AMB	0.94	239.4	09Sep2020, 21:15	101.1	601.6	Amparo
B-AMC	1.12	350.5	09Sep2020, 20:35	120.5	716.8	Amparo
B-AMD	2.21	418.4	09Sep2020, 23:40	287.6	1414.4	Amparo
B-EDA	0.63	225.3	09Sep2020, 20:10	67.8	403.2	Edna
B-EDB	0.99	303.8	09Sep2020, 20:35	106.5	633.6	Edna
B-EDC	1.29	479.3	09Sep2020, 20:05	138.8	825.6	Edna
B-EDD	1.19	308.9	09Sep2020, 21:10	128	761.6	Edna
B-EDE	2.79	349.5	10Sep2020, 01:10	300.2	1785.6	Edna
B-LIA	1.41	422	09Sep2020, 20:40	151.7	902.4	Lisa
B-LIB	0.66	714.8	09Sep2020, 18:40	85.9	422.4	Lisa
B-LIC	0.6	477.6	09Sep2020, 19:00	75.3	384.0	Lisa
B-LID	5.55	2798.5	09Sep2020, 20:05	804.9	3552.0	Lisa
B-MCA	1.13	331.6	09Sep2020, 20:45	121.6	723.2	McCombs
B-MIA	0.1	87.9	09Sep2020, 18:45	10.8	64.0	Miami
B-MIB	0.83	312.9	09Sep2020, 19:55	85.8	531.2	Miami
B-MIC	0.25	122.1	09Sep2020, 19:25	25.8	160.0	Miami
B-MID	6.6	3790.1	09Sep2020, 19:45	923.6	4224.0	Miami
B-P1A	4.78	1489.9	09Sep2020, 20:35	514.3	3059.2	Playa 1
B-P1B	4.28	804.6	09Sep2020, 22:35	460.5	2739.2	Playa 1
B-P1C	0.61	405.3	09Sep2020, 18:50	58.1	390.4	Playa 1
B-P1D	0.53	289.7	09Sep2020, 19:15	54.8	339.2	Playa 1
B-P6A	2.4	740.9	09Sep2020, 20:45	268.5	1536.0	Playa 6
B-P6B	0.25	434.6	09Sep2020, 18:25	35	160.0	Playa 6
B-P6C	0.16	109.8	09Sep2020, 19:15	20.8	102.4	Playa 6
B-P6D	0.82	472.2	09Sep2020, 19:20	95.4	524.8	Playa 6
B-P6E	6.02	3136.9	09Sep2020, 19:55	842.5	3852.8	Playa 6
B-PAA	0.64	160	09Sep2020, 21:20	68.9	409.6	Prescott Anthony
B-QLA	4.7	1198.7	09Sep2020, 21:15	505.7	3008.0	Quirke Lake
B-QLB	0.95	963.5	09Sep2020, 18:45	123.6	608.0	Quirke Lake
B-QLC	1.5	2137.4	09Sep2020, 18:35	225.3	960.0	Quirke Lake
B-QLD	0.4	538	09Sep2020, 18:35	56	256.0	Quirke Lake
B-QUE	0.73	570.1	09Sep2020, 19:10	98.5	467.2	Quirke Lake
B-SHA	2.42	959.1	09Sep2020, 19:55	260.4	1548.8	Shiprock
B-SHB	0.56	366.5	09Sep2020, 19:05	62.7	358.4	Shiprock
B-SHC	0.66	280.2	09Sep2020, 19:45	71	422.4	Shiprock

Chaparral Master Drainage Plan
HEC-HMS Results Summary

Hydrologic Element	Drainage Area (sq. mi.)	Peak Discharge (cfs)	Time of Peak	Volume (ac-ft)	Area (acres)	Proposed System
C-AMA	6.1	1118.2	09Sep2020, 21:20	705.5	3904.0	Amparo
C-EDA	6.89	1237	09Sep2020, 20:40	741.1	4409.6	Edna
C-EDC	5.27	731.6	09Sep2020, 20:40	567	3372.8	Edna
C-EDD	3.98	455.7	09Sep2020, 22:25	428.1	2547.2	Edna
C-LIA	8.22	3700.6	09Sep2020, 20:05	1118.4	5260.8	Lisa
C-MIA	7.78	4215.9	09Sep2020, 19:50	1046.2	4979.2	Miami
C-MIC	6.85	3892.2	09Sep2020, 19:50	949.6	4384.0	Miami
C-P1A	17.98	6461	09Sep2020, 20:05	2133.7	11507.2	Playa 1
C-P6A	16.88	5494.3	09Sep2020, 20:20	2089.6	10803.2	Playa 6
C-P6B	6.27	3154.5	09Sep2020, 19:55	877.5	4012.8	Playa 6
C-P6C	0.98	581.2	09Sep2020, 19:20	116.2	627.2	Playa 6
C-PAA	2.85	508.4	09Sep2020, 23:20	356.5	1824.0	Prescott Anthony
C-QLA	23.39	7118.7	09Sep2020, 19:55	2869	14969.6	Quirke Lake
C-SHA	3.64	1536.1	09Sep2020, 19:45	394.1	2329.6	Shiprock
R-AMA	6.1	1117.7	09Sep2020, 21:25	705.6	3904.0	Amparo
R-AMC	1.12	344.8	09Sep2020, 21:10	120.1	716.8	Amparo
R-AMD	2.21	418.1	10Sep2020, 00:15	287.7	1414.4	Amparo
R-EDA	6.89	1234.7	09Sep2020, 20:50	741.1	4409.6	Edna
R-EDB	0.99	303	09Sep2020, 20:45	106.5	633.6	Edna
R-EDC	5.27	730.1	09Sep2020, 20:50	566.9	3372.8	Edna
R-EDD	3.98	455.5	09Sep2020, 22:45	428.2	2547.2	Edna
R-EDE	2.79	348.9	10Sep2020, 01:30	300.1	1785.6	Edna
R-LIA	8.22	3697.1	09Sep2020, 20:05	1118.4	5260.8	Lisa
R-LIB	0.66	711.9	09Sep2020, 19:05	86.2	422.4	Lisa
R-LIC	0.6	475.8	09Sep2020, 19:30	75.4	384.0	Lisa
R-LID	5.55	2794.5	09Sep2020, 20:25	805.1	3552.0	Lisa
R-MCA	1.13	331.4	09Sep2020, 20:50	121.6	723.2	McCombs
R-MIA	7.78	4205.9	09Sep2020, 20:00	1045.8	4979.2	Miami
R-MIB	0.83	312.8	09Sep2020, 20:00	85.8	531.2	Miami
R-MIC	6.85	3886.3	09Sep2020, 19:50	949.6	4384.0	Miami
R-MID	6.6	3783.2	09Sep2020, 19:50	923.7	4224.0	Miami
R-P1C	0.61	403.5	09Sep2020, 19:25	58.3	390.4	Playa 1
R-P1D	0.53	288.6	09Sep2020, 19:40	54.8	339.2	Playa 1
R-P6B	6.27	3146.2	09Sep2020, 20:15	877.6	4012.8	Playa 6
R-P6C	0.98	576.4	09Sep2020, 19:50	116.3	627.2	Playa 6
R-P6D	0.82	471.7	09Sep2020, 19:25	95.4	524.8	Playa 6
R-P6E	6.02	3133.9	09Sep2020, 20:00	842.5	3852.8	Playa 6

Chaparral Master Drainage Plan
HEC-HMS Results Summary

Hydrologic Element	Drainage Area (sq. mi.)	Peak Discharge (cfs)	Time of Peak	Volume (ac-ft)	Area (acres)	Proposed System
R-PA2	2.85	506.4	09Sep2020, 23:45	356.3	1824.0	Prescott Anthony
R-PAA	0.64	159.9	09Sep2020, 21:35	68.9	409.6	Prescott Anthony
R-QLB	0.95	959.6	09Sep2020, 19:05	123.8	608.0	Quirke Lake
R-QLC	1.5	2105.2	09Sep2020, 18:55	225.2	960.0	Quirke Lake
R-QLD	0.4	530.5	09Sep2020, 19:05	56.3	256.0	Quirke Lake
R-QLE	0.73	559.1	09Sep2020, 19:50	98.4	467.2	Quirke Lake
R-SHB	0.56	365.6	09Sep2020, 19:25	62.7	358.4	Shiprock
R-SHC	0.66	279.8	09Sep2020, 20:05	71	422.4	Shiprock

Hydraulic Computations

Proposed Channel Improvements

Amparo Downstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00152 ft/ft
Normal Depth	5.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	1118 ft³/s

Results

Bottom Width	37.06 ft
Flow Area	285.29 ft²
Wetted Perimeter	78.29 ft
Top Width	77.06 ft
Critical Depth	2.75 ft
Critical Slope	0.01386 ft/ft
Velocity	3.9 ft/s
Velocity Head	0.24 ft
Specific Energy	5.24 ft
Froude Number	0.36
Flow Type	Subcritical

GVF Input Data

Downstream Depth	6.00 ft
Length	5.00 ft
Number Of Steps	2

GVF Output Data

Upstream Depth	6.00 ft
Profile Description	M1
Profile Headloss	0.00 ft
Downstream Velocity	3.1 ft/s
Upstream Velocity	3.1 ft/s
Normal Depth	5.00 ft
Critical Depth	2.75 ft
Channel Slope	0.00152 ft/ft
Critical Slope	0.01386 ft/ft

Amparo Upstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00277 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	508 ft³/s

Results

Bottom Width	31.30 ft
Flow Area	129.90 ft²
Wetted Perimeter	56.04 ft
Top Width	55.30 ft
Critical Depth	1.86 ft
Critical Slope	0.01561 ft/ft
Velocity	3.9 ft/s
Velocity Head	0.24 ft
Specific Energy	3.24 ft
Froude Number	0.45
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	3420.00 ft
Number Of Steps	5

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	9.47 ft
Downstream Velocity	3.9 ft/s
Upstream Velocity	3.9 ft/s
Normal Depth	3.00 ft
Critical Depth	1.86 ft
Channel Slope	0.00277 ft/ft
Critical Slope	0.01561 ft/ft

Edna Downstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00158 ft/ft
Normal Depth	5.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	1237 ft³/s

Results

Bottom Width	41.16 ft
Flow Area	305.78 ft²
Wetted Perimeter	82.39 ft
Top Width	81.16 ft
Critical Depth	2.76 ft
Critical Slope	0.01375 ft/ft
Velocity	4.0 ft/s
Velocity Head	0.25 ft
Specific Energy	5.25 ft
Froude Number	0.37
Flow Type	Subcritical

GVF Input Data

Downstream Depth	6.00 ft
Length	4652.00 ft
Number Of Steps	2

GVF Output Data

Upstream Depth	5.00 ft
Profile Description	M1
Profile Headloss	6.35 ft
Downstream Velocity	3.2 ft/s
Upstream Velocity	4.0 ft/s
Normal Depth	5.00 ft
Critical Depth	2.76 ft
Channel Slope	0.00158 ft/ft
Critical Slope	0.01375 ft/ft

Edna Upstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00260 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	732 ft³/s

Results

Bottom Width	49.41 ft
Flow Area	184.23 ft²
Wetted Perimeter	74.15 ft
Top Width	73.41 ft
Critical Depth	1.80 ft
Critical Slope	0.01541 ft/ft
Velocity	4.0 ft/s
Velocity Head	0.25 ft
Specific Energy	3.25 ft
Froude Number	0.44
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	4246.00 ft
Number Of Steps	1

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	11.04 ft
Downstream Velocity	4.0 ft/s
Upstream Velocity	4.0 ft/s
Normal Depth	3.00 ft
Critical Depth	1.80 ft
Channel Slope	0.00260 ft/ft
Critical Slope	0.01541 ft/ft

Lorraine Channel

Project Description

Friction Method Manning Formula
Solve For Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00150 ft/ft
Normal Depth	4.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	3701 ft³/s

Results

Bottom Width	217.97 ft
Flow Area	935.87 ft²
Wetted Perimeter	250.95 ft
Top Width	249.97 ft
Critical Depth	2.05 ft
Critical Slope	0.01426 ft/ft
Velocity	4.0 ft/s
Velocity Head	0.24 ft
Specific Energy	4.24 ft
Froude Number	0.36
Flow Type	Subcritical

GVF Input Data

Downstream Depth	5.00 ft
Length	25.00 ft
Number Of Steps	21

GVF Output Data

Upstream Depth	4.98 ft
Profile Description	M1
Profile Headloss	0.02 ft
Downstream Velocity	3.1 ft/s
Upstream Velocity	3.1 ft/s
Normal Depth	4.00 ft
Critical Depth	2.05 ft
Channel Slope	0.00150 ft/ft
Critical Slope	0.01426 ft/ft

McCombs Downstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00190 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	332 ft³/s

Results

Bottom Width	23.27 ft
Flow Area	105.81 ft²
Wetted Perimeter	48.01 ft
Top Width	47.27 ft
Critical Depth	1.67 ft
Critical Slope	0.01633 ft/ft
Velocity	3.1 ft/s
Velocity Head	0.15 ft
Specific Energy	3.15 ft
Froude Number	0.37
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	5157.00 ft
Number Of Steps	3

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	9.80 ft
Downstream Velocity	3.1 ft/s
Upstream Velocity	3.1 ft/s
Normal Depth	3.00 ft
Critical Depth	1.67 ft
Channel Slope	0.00190 ft/ft
Critical Slope	0.01633 ft/ft

McCombs Upstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00310 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	332 ft³/s

Results

Bottom Width	16.71 ft
Flow Area	86.14 ft²
Wetted Perimeter	41.45 ft
Top Width	40.71 ft
Critical Depth	1.96 ft
Critical Slope	0.01596 ft/ft
Velocity	3.8 ft/s
Velocity Head	0.23 ft
Specific Energy	3.23 ft
Froude Number	0.47
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	4367.00 ft
Number Of Steps	11

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	13.54 ft
Downstream Velocity	3.8 ft/s
Upstream Velocity	3.8 ft/s
Normal Depth	3.00 ft
Critical Depth	1.96 ft
Channel Slope	0.00310 ft/ft
Critical Slope	0.01596 ft/ft

Miami Downstream Channel

Project Description

Friction Method Manning Formula
Solve For Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00155 ft/ft
Normal Depth	4.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	4216 ft³/s

Results

Bottom Width	244.99 ft
Flow Area	1043.95 ft²
Wetted Perimeter	277.97 ft
Top Width	276.99 ft
Critical Depth	2.07 ft
Critical Slope	0.01419 ft/ft
Velocity	4.0 ft/s
Velocity Head	0.25 ft
Specific Energy	4.25 ft
Froude Number	0.37
Flow Type	Subcritical

GVF Input Data

Downstream Depth	5.00 ft
Length	2571.00 ft
Number Of Steps	3

GVF Output Data

Upstream Depth	4.01 ft
Profile Description	M1
Profile Headloss	2.99 ft
Downstream Velocity	3.2 ft/s
Upstream Velocity	4.0 ft/s
Normal Depth	4.00 ft
Critical Depth	2.07 ft
Channel Slope	0.00155 ft/ft
Critical Slope	0.01419 ft/ft

Miami Upstream Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00156 ft/ft
Normal Depth	4.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	3892 ft³/s

Results

Bottom Width	224.99 ft
Flow Area	963.94 ft²
Wetted Perimeter	257.97 ft
Top Width	256.99 ft
Critical Depth	2.08 ft
Critical Slope	0.01419 ft/ft
Velocity	4.0 ft/s
Velocity Head	0.25 ft
Specific Energy	4.25 ft
Froude Number	0.37
Flow Type	Subcritical

GVF Input Data

Downstream Depth	4.00 ft
Length	6204.00 ft
Number Of Steps	27

GVF Output Data

Upstream Depth	4.00 ft
Profile Description	Uniform Flow
Profile Headloss	9.68 ft
Downstream Velocity	4.0 ft/s
Upstream Velocity	4.0 ft/s
Normal Depth	4.00 ft
Critical Depth	2.08 ft
Channel Slope	0.00156 ft/ft
Critical Slope	0.01419 ft/ft

Prescott Anthony

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00140 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	160.00 ft³/s

Results

Bottom Width	9.91 ft
Flow Area	65.73 ft²
Wetted Perimeter	34.65 ft
Top Width	33.91 ft
Critical Depth	1.61 ft
Critical Slope	0.01742 ft/ft
Velocity	2.43 ft/s
Velocity Head	0.09 ft
Specific Energy	3.09 ft
Froude Number	0.31
Flow Type	Subcritical

GVF Input Data

Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 ft
Profile Description	
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	3.00 ft
Critical Depth	1.61 ft
Channel Slope	0.00140 ft/ft
Critical Slope	0.01742 ft/ft

Shiprock Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00330 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	313 ft³/s

Results

Bottom Width	14.67 ft
Flow Area	80.02 ft²
Wetted Perimeter	39.41 ft
Top Width	38.67 ft
Critical Depth	2.00 ft
Critical Slope	0.01600 ft/ft
Velocity	3.9 ft/s
Velocity Head	0.24 ft
Specific Energy	3.24 ft
Froude Number	0.48
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	5805.00 ft
Number Of Steps	4

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	19.16 ft
Downstream Velocity	3.9 ft/s
Upstream Velocity	3.9 ft/s
Normal Depth	3.00 ft
Critical Depth	2.00 ft
Channel Slope	0.00330 ft/ft
Critical Slope	0.01600 ft/ft

Sunny Sands Channel

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.035
Channel Slope	0.00330 ft/ft
Normal Depth	3.00 ft
Left Side Slope	4.00 ft/ft (H:V)
Right Side Slope	4.00 ft/ft (H:V)
Discharge	304 ft³/s

Results

Bottom Width	14.03 ft
Flow Area	78.10 ft²
Wetted Perimeter	38.77 ft
Top Width	38.03 ft
Critical Depth	2.00 ft
Critical Slope	0.01605 ft/ft
Velocity	3.9 ft/s
Velocity Head	0.24 ft
Specific Energy	3.24 ft
Froude Number	0.48
Flow Type	Subcritical

GVF Input Data

Downstream Depth	3.00 ft
Length	4760.00 ft
Number Of Steps	3

GVF Output Data

Upstream Depth	3.00 ft
Profile Description	Uniform Flow
Profile Headloss	15.71 ft
Downstream Velocity	3.9 ft/s
Upstream Velocity	3.9 ft/s
Normal Depth	3.00 ft
Critical Depth	2.00 ft
Channel Slope	0.00330 ft/ft
Critical Slope	0.01605 ft/ft

Lisa Pond Improvements

Lisa Pond Runoff Volume Calculations

$$V = c (P/12) A$$

where: $c=0.38$

$P=2.71 \text{ in}$ - obtained from NOAA14 website (see attached exhibit)

$A=\text{Contributing Area}$ - obtained from GIS (see attached exhibit)

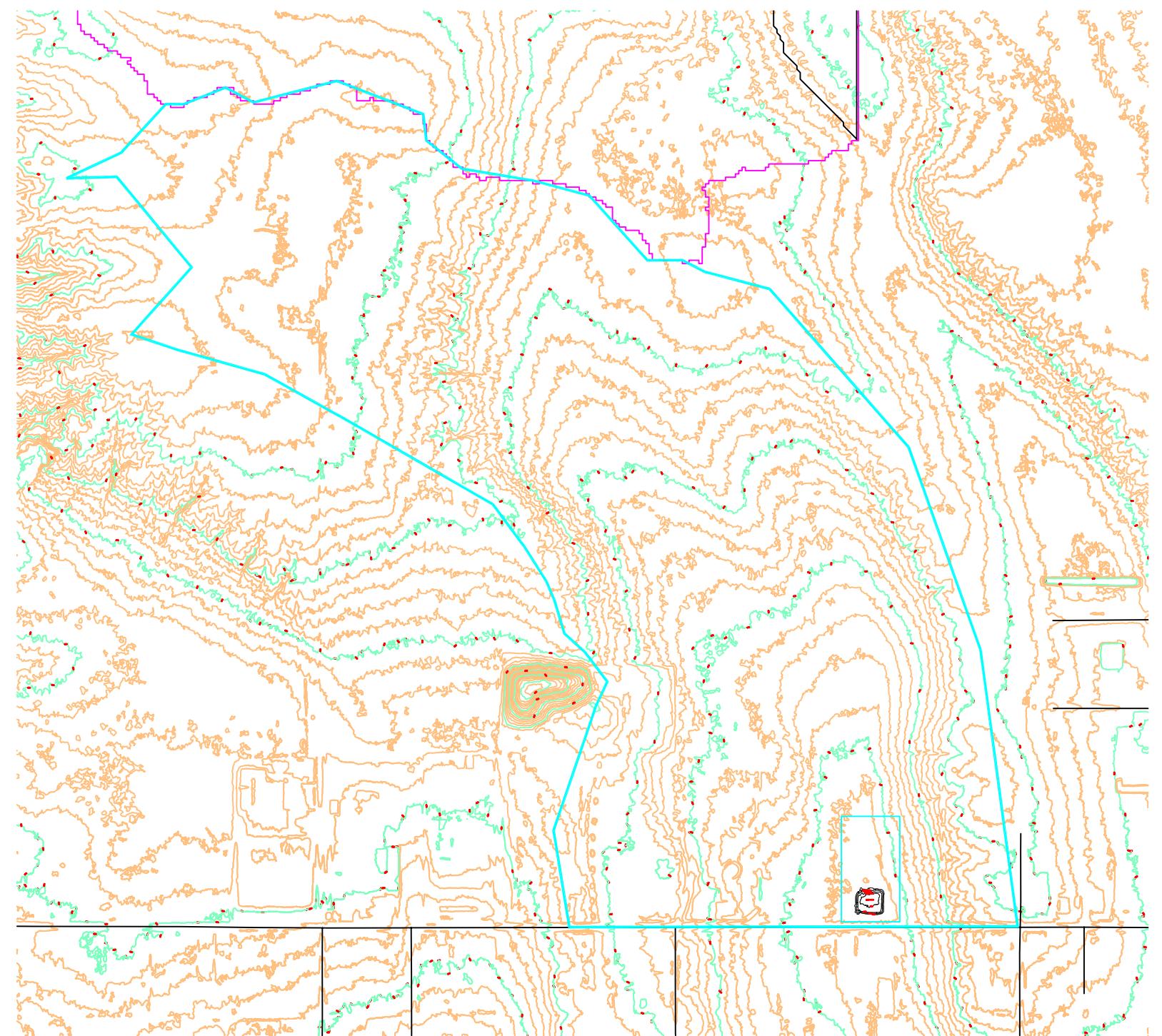
$$V = 0.38 * (2.71/12) 457.332$$

$$V = 39.25 \text{ acre-feet} \quad \text{Volume Needed}$$

Lisa Pond Volume Calculations

Existing Lisa Pond Volume					
Elevation	Area (sq ft)	Area (sq mi)	Incremental volume (ft ³)	Total Volume (ft ³)	Total Volume (Ac.Ft)
4040	10875	0.000390087	36316	36316	0.83
4042	25441	0.00091257	57222	93538	2.15
4044	31781	0.001139987	70323	163861	3.76
4046	38542	0.001382504			

Proposed Lisa Pond Volume to Property Boundary					
Elevation	Area (sq ft)	Area (sq mi)	Incremental volume (ft ³)	Total Volume (ft ³)	Total Volume (Ac.Ft)
4033.5	97197	0.003486463	1807650	1807650	41.50
4045.5	204078	0.007320291			





POINT PRECIPITATION FREQUENCY ESTIMATES FROM NOAA ATLAS 14



New Mexico 32.017 N 106.595 W 3907 feet

from "Precipitation-Frequency Atlas of the United States" NOAA Atlas 14, Volume 1, Version 4

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M. Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland, 2006

Extracted: Thu Feb 28 2008

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[Seasonality](#)

[Location Maps](#)

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Precipitation Frequency Estimates (inches)

ARI* (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0.22	0.33	0.41	0.55	0.69	0.79	0.83	0.95	1.03	1.20	1.29	1.46	1.65	1.82	2.28	2.70	3.20	3.65
2	0.28	0.43	0.53	0.72	0.89	1.03	1.08	1.21	1.32	1.53	1.64	1.86	2.11	2.34	2.93	3.46	4.09	4.67
5	0.38	0.58	0.72	0.96	1.19	1.39	1.44	1.59	1.72	2.00	2.15	2.45	2.78	3.11	3.86	4.51	5.28	6.03
10	0.46	0.69	0.86	1.16	1.43	1.68	1.73	1.89	2.02	2.37	2.56	2.91	3.32	3.72	4.57	5.30	6.15	7.01
25	0.56	0.85	1.05	1.42	1.76	2.07	2.12	2.29	2.43	2.88	3.14	3.55	4.08	4.58	5.52	6.35	7.29	8.27
50	0.64	0.98	1.21	1.63	2.02	2.38	2.44	2.60	2.74	3.28	3.61	4.05	4.67	5.26	6.26	7.14	8.14	9.19
100	0.73	1.11	1.37	1.85	2.29	2.71	2.77	2.93	3.06	3.69	4.11	4.58	5.31	5.99	7.02	7.94	8.98	10.11
200	0.82	1.24	1.54	2.07	2.57	3.05	3.12	3.27	3.38	4.13	4.64	5.14	5.98	6.76	7.79	8.75	9.81	11.00
500	0.94	1.43	1.77	2.38	2.95	3.53	3.60	3.73	3.82	4.73	5.40	5.93	6.93	7.84	8.91	9.82	10.90	12.15
1000	1.04	1.58	1.96	2.64	3.27	3.91	3.99	4.11	4.17	5.21	6.04	6.58	7.70	8.72	9.80	10.69	11.71	13.00

[Text version of table](#)

* These precipitation frequency estimates are based on a partial duration series. ARI is the Average Recurrence Interval.
Please refer to the [documentation](#) for more information. NOTE: Formatting forces estimates near zero to appear as zero.

* Upper bound of the 90% confidence interval Precipitation Frequency Estimates (inches)

ARI** (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0.25	0.38	0.47	0.63	0.78	0.89	0.94	1.06	1.15	1.33	1.43	1.62	1.83	2.02	2.53	2.99	3.54	4.03
2	0.32	0.49	0.61	0.82	1.01	1.16	1.22	1.36	1.47	1.70	1.82	2.08	2.35	2.60	3.25	3.83	4.52	5.16
5	0.43	0.66	0.81	1.10	1.36	1.57	1.63	1.78	1.92	2.23	2.39	2.73	3.10	3.45	4.28	4.99	5.84	6.65
10	0.52	0.79	0.98	1.31	1.63	1.89	1.94	2.11	2.25	2.64	2.85	3.25	3.71	4.14	5.08	5.86	6.82	7.74
25	0.63	0.96	1.19	1.61	1.99	2.32	2.38	2.55	2.70	3.22	3.52	3.98	4.56	5.12	6.16	7.05	8.10	9.15
50	0.73	1.10	1.37	1.84	2.28	2.67	2.73	2.90	3.04	3.69	4.07	4.58	5.28	5.92	7.02	7.99	9.08	10.23
100	0.82	1.25	1.55	2.09	2.58	3.03	3.10	3.26	3.40	4.21	4.70	5.23	6.06	6.83	7.94	8.96	10.11	11.31
200	0.92	1.41	1.74	2.35	2.90	3.42	3.49	3.65	3.77	4.76	5.39	5.94	6.90	7.80	8.90	9.98	11.14	12.43
500	1.06	1.62	2.01	2.70	3.34	3.96	4.04	4.18	4.27	5.59	6.42	7.01	8.17	9.22	10.37	11.39	12.57	13.95
1000	1.18	1.79	2.22	3.00	3.71	4.39	4.49	4.60	4.68	6.29	7.35	7.92	9.25	10.45	11.57	12.61	13.65	15.09

* The upper bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are greater than.

** These precipitation frequency estimates are based on a partial duration series. ARI is the Average Recurrence Interval.

Please refer to the [documentation](#) for more information. NOTE: Formatting prevents estimates near zero to appear as zero.

* Lower bound of the 90% confidence interval Precipitation Frequency Estimates (inches)

ARI** (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0.19	0.29	0.36	0.48	0.60	0.69	0.74	0.85	0.93	1.08	1.16	1.31	1.49	1.64	2.06	2.44	2.90	3.31
2	0.25	0.38	0.47	0.63	0.78	0.91	0.96	1.08	1.19	1.38	1.48	1.68	1.90	2.11	2.65	3.13	3.71	4.24

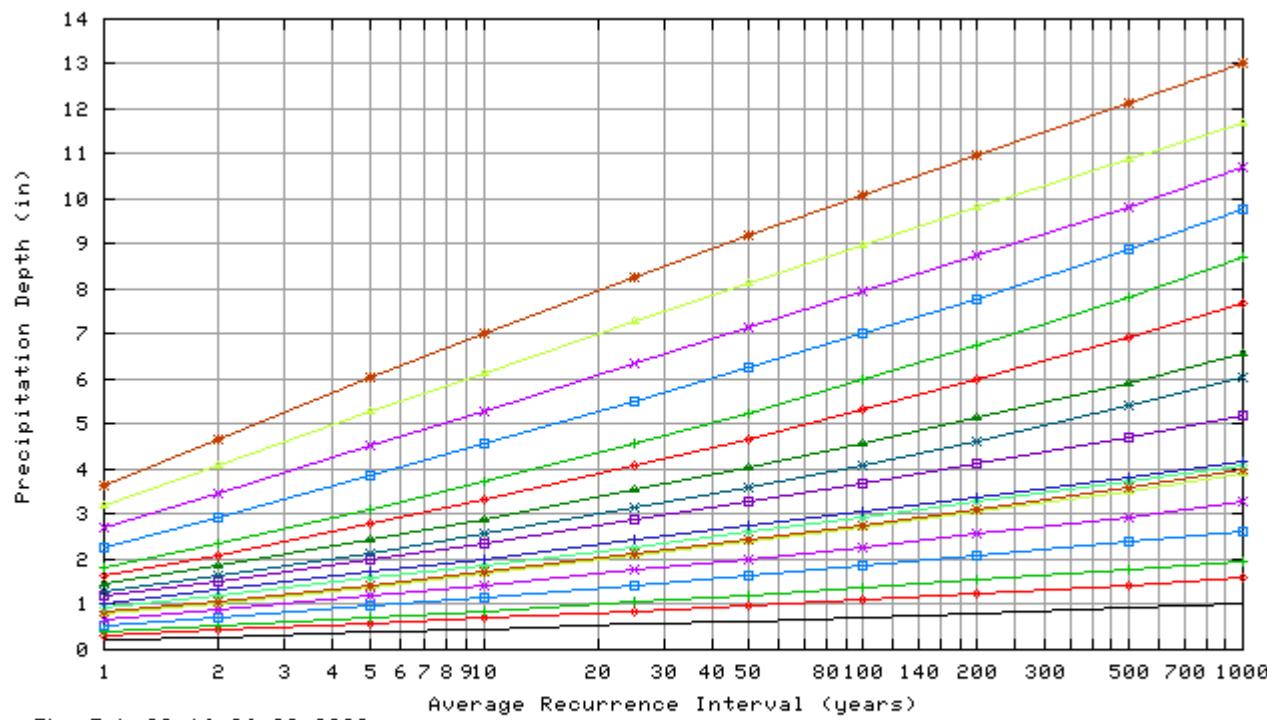
5	0.33	0.51	0.63	0.85	1.05	1.23	1.28	1.42	1.54	1.80	1.94	2.20	2.51	2.79	3.48	4.08	4.78	5.46
10	0.40	0.61	0.75	1.01	1.26	1.47	1.52	1.67	1.80	2.12	2.29	2.60	2.98	3.32	4.10	4.76	5.54	6.33
25	0.49	0.74	0.92	1.24	1.53	1.80	1.86	2.02	2.15	2.55	2.77	3.14	3.61	4.04	4.91	5.66	6.52	7.41
50	0.56	0.84	1.05	1.41	1.75	2.05	2.12	2.27	2.42	2.87	3.15	3.54	4.10	4.58	5.51	6.32	7.21	8.17
100	0.62	0.95	1.18	1.59	1.97	2.32	2.39	2.54	2.68	3.20	3.52	3.94	4.58	5.12	6.10	6.95	7.89	8.90
200	0.70	1.06	1.32	1.77	2.20	2.59	2.66	2.81	2.95	3.53	3.90	4.34	5.07	5.69	6.68	7.56	8.52	9.57
500	0.79	1.21	1.50	2.02	2.50	2.95	3.03	3.17	3.29	3.95	4.41	4.90	5.73	6.43	7.47	8.34	9.29	10.41
1000	0.87	1.33	1.65	2.22	2.75	3.23	3.32	3.46	3.57	4.26	4.81	5.32	6.22	6.99	8.08	8.94	9.85	11.00

* The lower bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are less than.

** These precipitation frequency estimates are based on a partial duration maxima series. ARI is the Average Recurrence Interval.

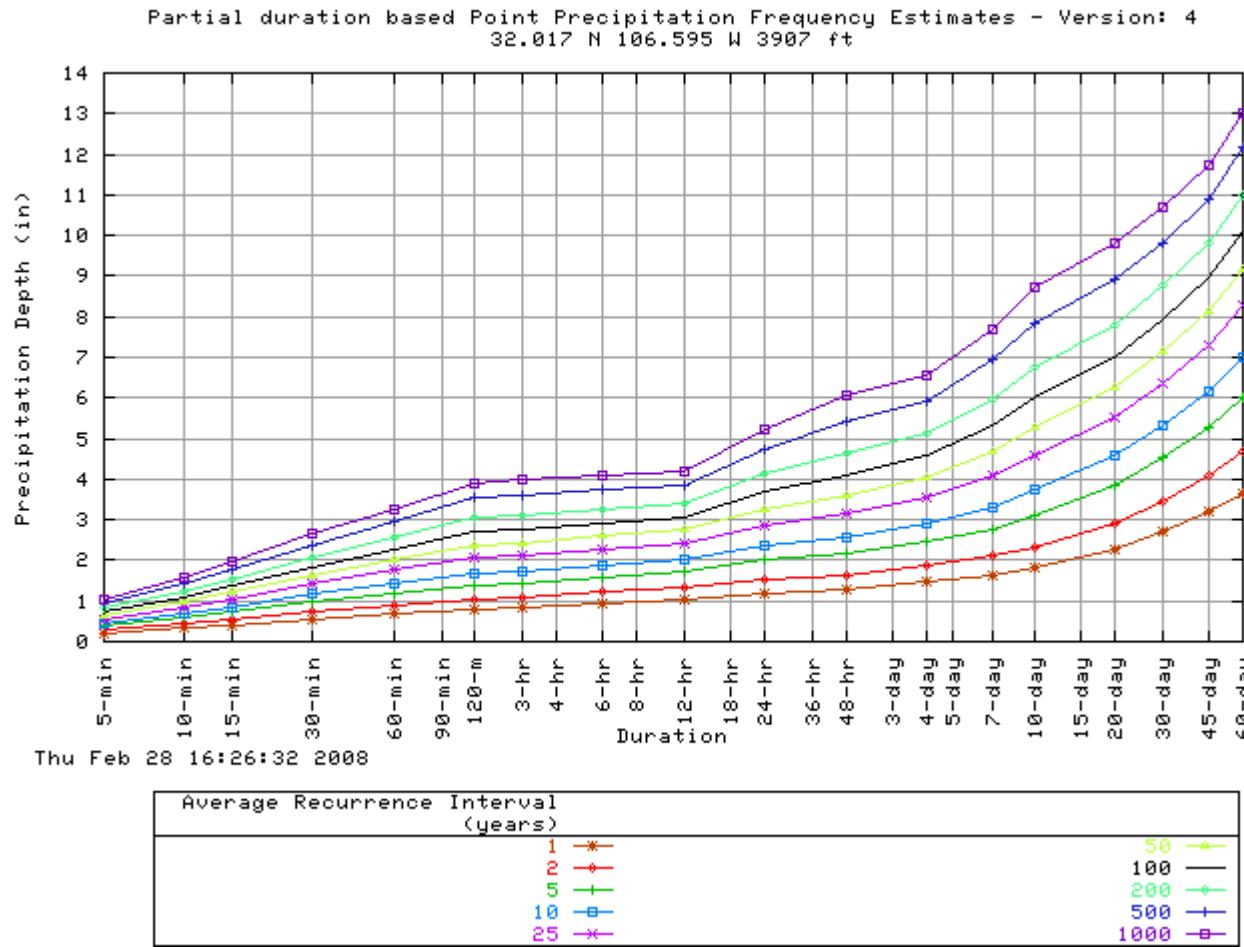
Please refer to the [documentation](#) for more information. NOTE: Formatting prevents estimates near zero to appear as zero.

Partial duration based Point Precipitation Frequency Estimates - Version: 4
38.017 N 106.595 W 3900 ft

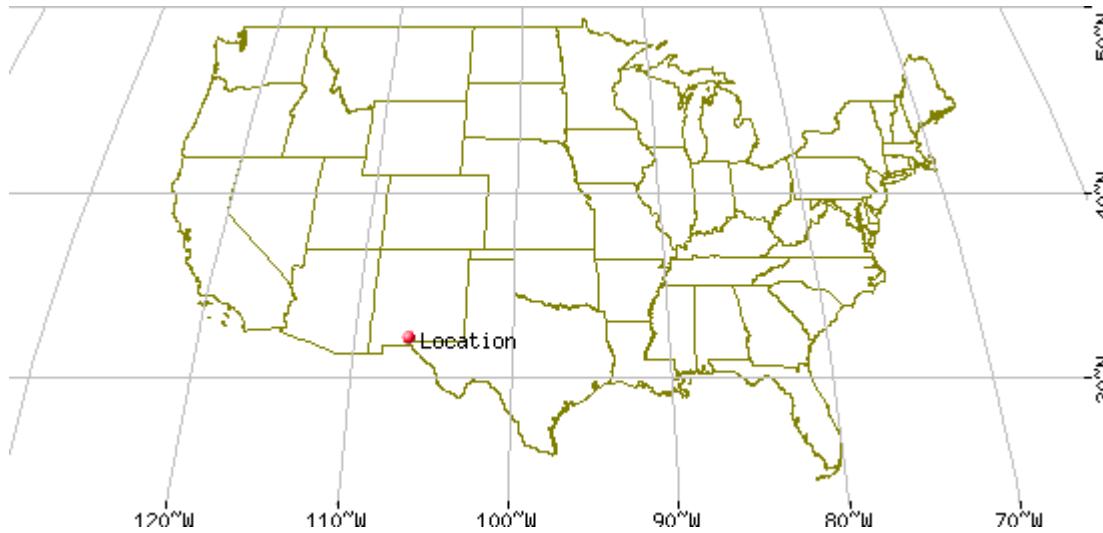


Thu Feb 28 16:26:32 2008

Duration							
5-min	—	120-min	—*	48-hr	—*	30-day	—*
10-min	-o-	3-hr	-*—	4-day	-*—	45-day	-*—
15-min	-+	6-hr	-+—	7-day	-+—	60-day	-+—
30-min	-□-	12-hr	-++—	10-day	-++—		
60-min	-x-	24-hr	-□—	20-day	-□—		

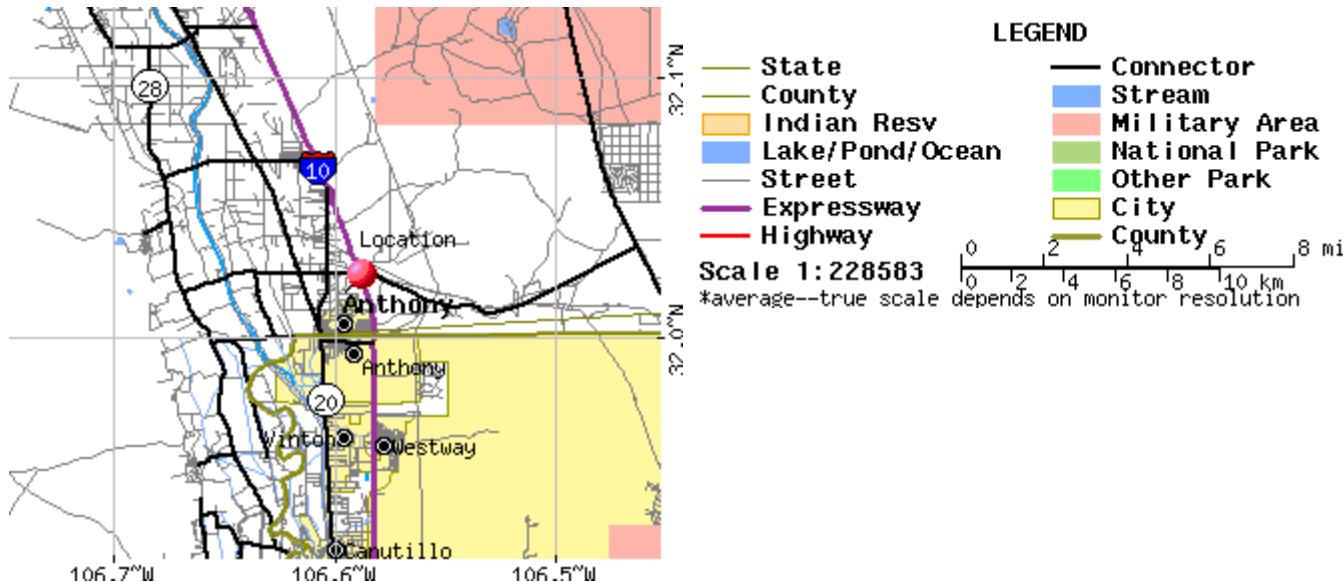


Maps -



These maps were produced using a direct map request from the
[U.S. Census Bureau Mapping and Cartographic Resources](#)
[Tiger Map Server](#).

Please read [disclaimer](#) for more information.



Other Maps/Photographs -

[View USGS digital orthophoto quadrangle \(DOQ\)](#) covering this location from TerraServer; [USGS Aerial Photograph](#) may also be available from this site. A DOQ is a computer-generated image of an aerial photograph in which image displacement caused by terrain relief and camera tilts has been removed. It combines the image characteristics of a photograph with the geometric qualities of a map. Visit the [USGS](#) for more information.

Watershed/Stream Flow Information -

[Find the Watershed](#) for this location using the U.S. Environmental Protection Agency's site.

Climate Data Sources -

Precipitation frequency results are based on data from a variety of sources, but largely NCDC. The following links provide general information about observing sites in the area, regardless of if their data was used in this study. For detailed information about the stations used in this study, please refer to our documentation.

Using the [National Climatic Data Center's \(NCDC\)](#) station search engine, locate other climate stations within:

+/-30 minutes ...OR... +/-1 degree of this location (32.017/-106.595). Digital ASCII data can be obtained directly from [NCDC](#).

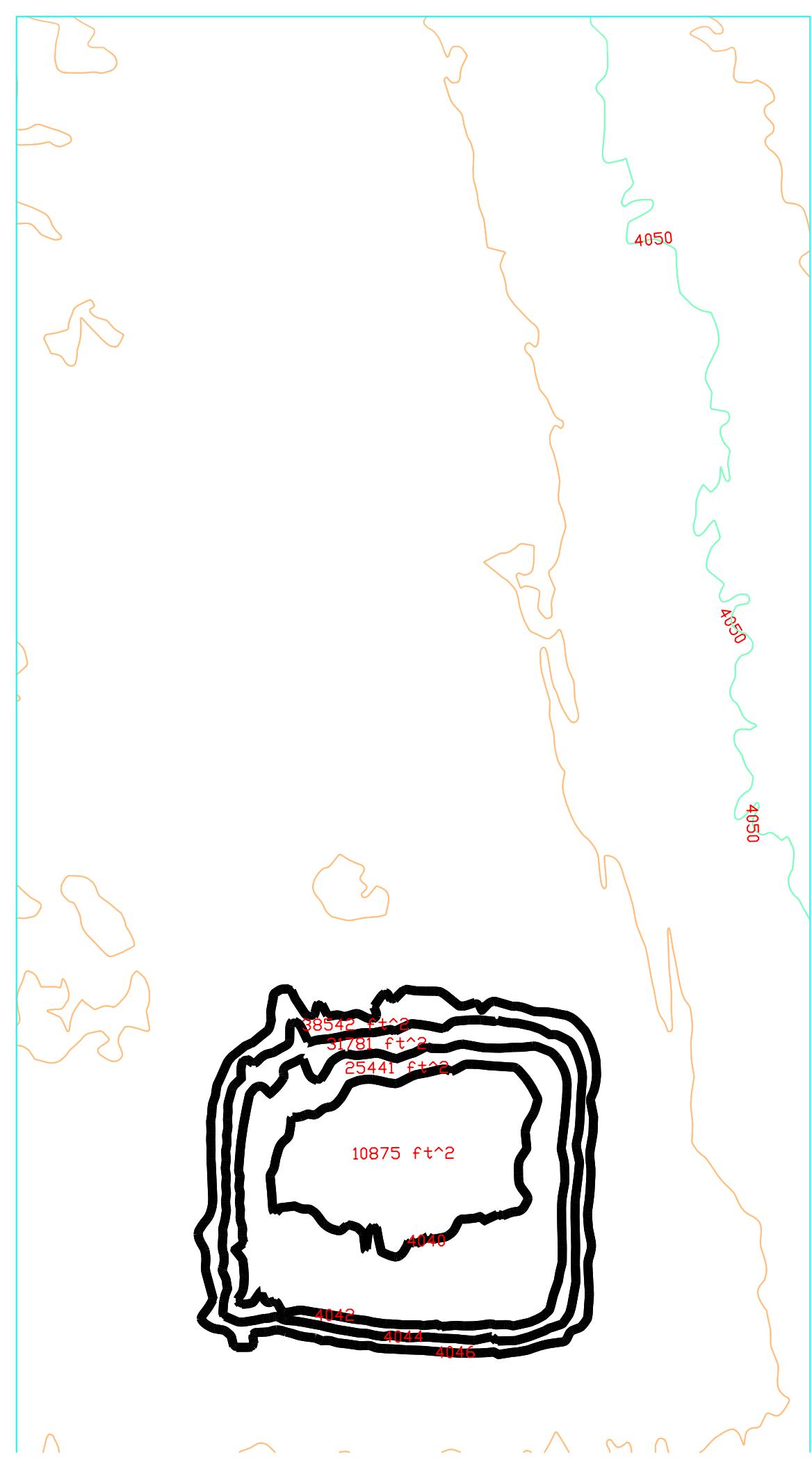
Find [Natural Resources Conservation Service \(NRCS\) SNOTEL](#) (SNOWpack TELemetry) stations by visiting the [Western Regional Climate Center's state-specific SNOTEL station maps](#).

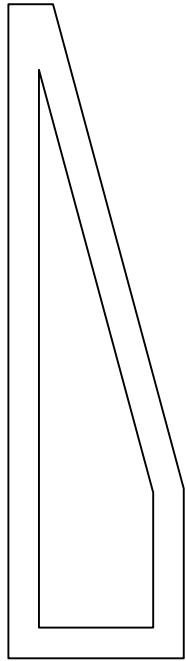
Hydrometeorological Design Studies Center
DOC/NOAA/National Weather Service
1325 East-West Highway
Silver Spring, MD 20910

(301) 713-1669

Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)





Lisa Pond at Property
Top Elevation =4045.5
Top Area=204078 ft²
Bottom Elevation =4033
Bottom Area=97197 ft²

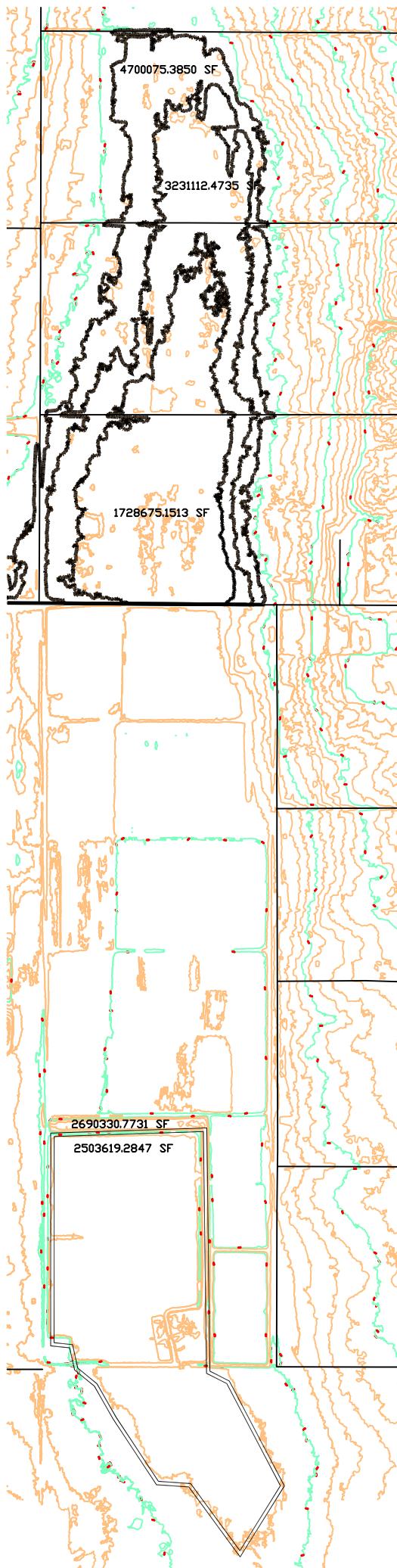
Quirke Lake Improvements

Quirke Lake Proposed Improvements

Volume taken out of floodplain north of Lisa Road						Total Volume (Ac.Ft)
Elevation	Area (sq ft)	Area (sq mi)	Incremental volume (ft ³)	Total Volume (ft ³)		
4034	1728675	0.06200768	4959787.5			0
4036	3231112.5	0.11590021		4959787.5		113.86
4038	4700075	0.16859199	7931187.5		12890975	295.94

Quirke Lake Expansion with 4:1 side slopes						Total Volume (Ac.Ft)
Top Area	2627268	Elevation	Incremental volume (ft ³)	Total Volume (ft ³)		
Elevation	Area (sq ft)	Area (sq mi)				
4024	2503619	0.08980497	15581847			0
4030	2690330	0.09650231		15581847		357.71

Therefore improvement is 6 feet at 4:1





Chaparral Drainage Master Plan
Estimate of Project Costs
04/29/08



Cost Summary

North System

	Miami Upstream Channel	Miami Channel Downstream	Shiprock Channel	Capitol Berm	Item Total
Construction					
Excavation	\$ 1,692,000	\$ 762,000	\$ 162,000	\$ 63,000	\$ 2,679,000
Roadway Crossing (LWC)	\$ 656,000	\$ 196,000	\$ 284,000	\$ -	\$ 1,136,000
Driveway Crossing (LWC)	\$ -	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 1,584,000	\$ 198,000	\$ 44,000	\$ -	\$ 1,826,000
Miscellaneous (10%)	\$ 394,000	\$ 116,000	\$ 49,000	\$ 7,000	\$ 566,000
Subtotal	\$ 4,326,000	\$ 1,272,000	\$ 539,000	\$ 70,000	\$ 6,207,000
Non-Construction					
Property*	\$ 820,000	\$ 380,000	\$ 180,000	\$ 20,000	\$ 1,400,000
Professional Services (20%)	\$ 866,000	\$ 255,000	\$ 108,000	\$ 14,000	\$ 1,243,000
Contingencies (15%)	\$ 649,000	\$ 191,000	\$ 81,000	\$ 11,000	\$ 932,000
Subtotal	\$ 2,335,000	\$ 826,000	\$ 369,000	\$ 45,000	\$ 3,575,000
Total (LWC)	\$ 6,661,000	\$ 2,098,000	\$ 908,000	\$ 115,000	\$ 9,782,000
Total (CBC)	\$ 12,309,000	\$ 3,589,000	\$ 1,241,000	\$ 115,000	\$ 17,254,000

* A Portion of property for Capitol Berm is owned by the State of New Mexico and there was no cost assumed for the use of this property

Central System

	Sunny Sands Channel	Edna Upstream Channel	Edna Downstream Channel	Lorraine Channel	Katydid Berm	Wicker Berm	Quirke Lake	Item Total
Construction								
Excavation	\$ 132,000	\$ 252,000	\$ 408,000	\$ 1,734,000	\$ 259,000	\$ 224,000	\$ 3,486,000	\$ 6,495,000
Roadway Crossing	\$ 143,000	\$ 220,000	\$ 55,000	\$ 93,000	\$ 64,000	\$ -	\$ -	\$ 575,000
Driveway Crossing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 44,000	\$ 22,000	\$ 44,000	\$ 1,210,000	\$ -	\$ -	\$ -	\$ 1,320,000
Miscellaneous (10%)	\$ 32,000	\$ 50,000	\$ 51,000	\$ 304,000	\$ 33,000	\$ 23,000	\$ 349,000	\$ 842,000
Subtotal	\$ 351,000	\$ 544,000	\$ 558,000	\$ 3,341,000	\$ 356,000	\$ 247,000	\$ 3,835,000	\$ 9,232,000
Non-Construction								
Property*	\$ 160,000	\$ 200,000	\$ 240,000	\$ 600,000	\$ -	\$ -	\$ -	\$ 1,200,000
Professional Services (20%)	\$ 71,000	\$ 109,000	\$ 112,000	\$ 669,000	\$ 72,000	\$ 50,000	\$ 767,000	\$ 1,850,000
Contingencies (15%)	\$ 53,000	\$ 82,000	\$ 84,000	\$ 502,000	\$ 54,000	\$ 38,000	\$ 576,000	\$ 1,389,000
Subtotal	\$ 284,000	\$ 391,000	\$ 436,000	\$ 1,771,000	\$ 126,000	\$ 88,000	\$ 1,343,000	\$ 4,439,000
Total (LWC)	\$ 635,000	\$ 935,000	\$ 994,000	\$ 5,112,000	\$ 482,000	\$ 335,000	\$ 5,178,000	\$ 13,671,000
Total (CBC)	\$ 771,000	\$ 1,535,000	\$ 1,168,000	\$ 5,747,000	\$ 482,000	\$ 335,000	\$ 5,178,000	\$ 15,216,000

* A Portion of property for Lorraine Channel is owned by Dona Ana County and there was no cost assumed for the use of this property

* Property for Katydid Berm is owned by the Bureau of Land Management and there was no cost assumed for the use of this property

* Property for Wicker Berm is owned by the Bureau of Land Management and there was no cost assumed for the use of this property

* Property for Quirke Lake is privately owned with work consisting of deepening an existing structure and there was no cost assumed for the use of this property

**URS**

**Chaparral Drainage Master Plan
Estimate of Project Costs
04/29/08**

Cost Summary**South System**

	McCombs Upstream Channel	McCombs Downstream Channel	Prescott Anthony Channel	Amparo Upstream Channel	Amparo Downstream Channel	Sand Dunes Berm	Lisa Pond	Playa 6 (Hermosa Pond)	Item Total
Construction									
Excavation	\$ 132,000	\$ 624,000	\$ 78,000	\$ 144,000	\$ 690,000	\$ 21,000	\$ 360,000	\$ 30,000	\$ 2,079,000
Roadway Crossing (LWC)	\$ 192,000	\$ 198,000	\$ 185,000	\$ 104,000	\$ 368,000	-	-	-	\$ 1,047,000
Driveway Crossing (LWC)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 132,000	\$ 132,000	\$ 66,000	\$ 88,000	\$ 44,000	-	-	-	\$ 462,000
Miscellaneous (10%)	\$ 46,000	\$ 96,000	\$ 33,000	\$ 34,000	\$ 111,000	\$ 3,000	\$ 36,000	\$ 3,000	\$ 362,000
Subtotal	\$ 502,000	\$ 1,050,000	\$ 362,000	\$ 370,000	\$ 1,213,000	\$ 24,000	\$ 396,000	\$ 33,000	\$ 3,950,000
Non-Construction									
Property*	\$ 140,000	\$ 280,000	\$ 60,000	\$ 140,000	\$ 420,000	-	-	-	\$ 1,040,000
Professional Services (20%)	\$ 101,000	\$ 210,000	\$ 73,000	\$ 74,000	\$ 243,000	\$ 5,000	\$ 80,000	\$ 7,000	\$ 793,000
Contingencies (15%)	\$ 76,000	\$ 158,000	\$ 55,000	\$ 56,000	\$ 182,000	\$ 4,000	\$ 60,000	\$ 5,000	\$ 596,000
Subtotal	\$ 317,000	\$ 648,000	\$ 188,000	\$ 270,000	\$ 845,000	\$ 9,000	\$ 140,000	\$ 12,000	\$ 2,429,000
Total (LWC)	\$ 819,000	\$ 1,698,000	\$ 550,000	\$ 640,000	\$ 2,058,000	\$ 33,000	\$ 536,000	\$ 45,000	\$ 6,379,000
Total (CBC)	\$ 998,000	\$ 2,224,000	\$ 567,000	\$ 1,101,000	\$ 2,951,000	\$ 33,000	\$ 536,000	\$ 45,000	\$ 8,455,000

* A Portion of property for County Line Channel is owned by the Gadsten School District and there was no cost assumed for the use of this property

* Property for Sand Dunes Berm is owned by the Bureau of Land Management and there was no cost assumed for the use of this property

* Property for Lisa Pond is owned by the Bureau of Land Management and Dona Ana County and there was no cost assumed for the use of this property

Grand Total

	North System	Central System	South System	Item Total
Construction				
Excavation	\$ 2,679,000	\$ 6,495,000	\$ 2,079,000	\$ 11,253,000
Roadway Crossing (LWC)	\$ 1,136,000	\$ 575,000	\$ 1,047,000	\$ 2,758,000
Driveway Crossing (LWC)	\$ -	\$ -	\$ -	\$ -
Drop Structures	\$ 1,826,000	\$ 1,320,000	\$ 462,000	\$ 3,608,000
Miscellaneous (10%)	\$ 566,000	\$ 842,000	\$ 362,000	\$ 1,770,000
Subtotal	\$ 6,207,000	\$ 9,232,000	\$ 3,950,000	\$ 19,389,000
Non-Construction				
Property	\$ 1,400,000	\$ 1,200,000	\$ 1,040,000	\$ 3,640,000
Professional Services (20%)	\$ 1,243,000	\$ 1,850,000	\$ 793,000	\$ 3,886,000
Contingencies (15%)	\$ 932,000	\$ 1,389,000	\$ 596,000	\$ 2,917,000
Subtotal	\$ 3,575,000	\$ 4,439,000	\$ 2,429,000	\$ 10,443,000
Total (LWC)	\$ 9,782,000	\$ 13,671,000	\$ 6,379,000	\$ 29,832,000
Total (CBC)	\$ 17,254,000	\$ 15,216,000	\$ 8,455,000	\$ 40,925,000



URS

**Chaparral Drainage Master Plan
Estimate of Project Costs
04/29/08**

Quantity Summary

Depth or Height	Construction Costs																		Subtotal					
	Excavation			Main Road Crossing (LWC)			Driveway Crossing (LWC)			Gabions w/ Riprap Pad			Culverts			Miscellaneous								
	Cut/Fill (cy)	Unit Cost (\$)	Total (\$)	Length (ft)	Unit Cost (\$)	Total (\$)	Length (ft)	Unit Cost (\$)	Total (\$)	Total Length (ft)	Unit Cost (\$)	Total (\$)	Total Length (ft)	Unit Cost (\$)	Total (\$)	Subtotal (\$)	Percentage (%)	Total (\$)						
North System																								
Miami Upstream Channel	5	282,000	\$ 6.00	\$ 1,692,000	2980	\$ 220.00	\$ 656,000	0 \$ 180.00	\$ -	7,200	\$ 220	\$ 1,584,000	-	\$ -	\$ -	\$ 3,932,000	10%	\$ 394,000	\$ 4,326,000					
Miami Channel Downstream	5	127,000	\$ 6.00	\$ 762,000	890	\$ 220.00	\$ 196,000	0 \$ 180.00	\$ -	900	\$ 220	\$ 198,000	-	\$ -	\$ -	\$ 1,156,000	10%	\$ 116,000	\$ 1,272,000					
Shiprock Channel	4	27,000	\$ 6.00	\$ 162,000	1290	\$ 220.00	\$ 284,000	0 \$ 180.00	\$ -	200	\$ 220	\$ 44,000	-	\$ -	\$ -	\$ 490,000	10%	\$ 49,000	\$ 539,000					
Capitol Berm	3	9,000	\$ 7.00	\$ 63,000												\$ 63,000	10%	\$ 7,000	\$ 70,000					
Total		445,000		\$ 2,679,000	5,200		\$ 1,136,000		-	\$ -		\$ 8,300		\$ 1,826,000		\$ -		\$ 5,641,000		\$ 566,000		\$ 6,207,000		
Central System																								
Sunny Sands Channel	4	22,000	\$ 6.00	\$ 132,000	650	\$ 220.00	\$ 143,000	0 \$ 180.00	\$ -	200	\$ 220	\$ 44,000	-	\$ -	\$ -	\$ 319,000	10%	\$ 32,000	\$ 351,000					
Edna Upstream Channel	4	42,000	\$ 6.00	\$ 252,000	1000	\$ 220.00	\$ 220,000	0 \$ 180.00	\$ -	100	\$ 220	\$ 22,000	-	\$ -	\$ -	\$ 494,000	10%	\$ 50,000	\$ 544,000					
Edna Downstream Channel	6	68,000	\$ 6.00	\$ 408,000	250	\$ 220.00	\$ 55,000	0 \$ 180.00	\$ -	200	\$ 220	\$ 44,000	-	\$ -	\$ -	\$ 507,000	10%	\$ 51,000	\$ 558,000					
Kaydell Channel	5	289,000	\$ 6.00	\$ 1,734,000	420	\$ 220.00	\$ 93,000	0 \$ 180.00	\$ -	5,500	\$ 220	\$ 1,210,000				\$ 3,037,000	10%	\$ 304,000	\$ 3,341,000					
Wicker Berm	6	37,000	\$ 7.00	\$ 259,000												\$ 323,000	10%	\$ 33,000	\$ 356,000					
Quirke Lake	6	32,000	\$ 7.00	\$ 224,000												\$ 224,000	10%	\$ 23,000	\$ 257,000					
Total		581,000		\$ 6,496,000			\$ 511,000		-	\$ -		\$ 6,000		\$ 1,320,000		400		\$ 64,000		\$ 3,486,000		\$ 3,825,000		
Total		1,071,000		\$ 6,495,000	2,400		\$ 511,000		-	\$ -		\$ 6,000		\$ 1,320,000		400		\$ 64,000		\$ 8,390,000		\$ 842,000		\$ 9,222,000
South System																								
McCombs Upstream Channel	4	22,000	\$ 6.00	\$ 132,000	870	\$ 220.00	\$ 192,000	0 \$ 180.00	\$ -	600	\$ 220	\$ 132,000	-	\$ -	\$ -	\$ 456,000	10%	\$ 46,000	\$ 502,000					
McCombs Downstream Channel	4	104,000	\$ 6.00	\$ 624,000	900	\$ 220.00	\$ 198,000	0 \$ 180.00	\$ -	600	\$ 220	\$ 132,000	-	\$ -	\$ -	\$ 954,000	10%	\$ 95,000	\$ 1,050,000					
Prescott Anthony Channel	4	13,000	\$ 6.00	\$ 78,000	840	\$ 220.00	\$ 185,000	0 \$ 180.00	\$ -	300	\$ 220	\$ 66,000	-	\$ -	\$ -	\$ 329,000	10%	\$ 33,000	\$ 362,000					
Amparo Upstream Channel	4	24,000	\$ 6.00	\$ 144,000	470	\$ 220.00	\$ 104,000	0 \$ 180.00	\$ -	400	\$ 220	\$ 98,000	-	\$ -	\$ -	\$ 336,000	10%	\$ 34,000	\$ 370,000					
Amparo Downstream Channel	6	115,000	\$ 6.00	\$ 690,000	1670	\$ 220.00	\$ 368,000	0 \$ 180.00	\$ -	200	\$ 220	\$ 44,000	-	\$ -	\$ -	\$ 1,102,000	10%	\$ 111,000	\$ 1,213,000					
Sand Dunes Berm	3	3,000	\$ 7.00	\$ 21,000												\$ 21,000	10%	\$ 3,000	\$ 24,000					
Lisa Pond	12	60,000	\$ 6.00	\$ 360,000												\$ 360,000	10%	\$ 36,000	\$ 396,000					
Playa 6 (Hermosa Pond)		5,000	\$ 6.00	\$ 30,000												\$ 30,000	10%	\$ 3,000	\$ 33,000					
Total		346,000		\$ 2,079,000	4,800		\$ 1,047,000		-	\$ -		\$ 2,100		\$ 462,000		\$ -		\$ 3,588,000		\$ 362,000		\$ 3,950,000		
Grand Total																\$ 64,000		\$ 17,619,000		\$ 1,770,000		\$ 19,389,000		



**Chaparral Drainage Master Plan
Estimate of Project Costs
04/29/08**

Quantity Summary

NOTES:
 Main Road Crossing unit cost based on height of CBC
 Driveway Crossing unit cost based on height of CBC

	Non-Construction Costs								Grand Total	
	Property			Professional Services		Contingency		Subtotal		
	Area (ac)	Unit Cost (\$)	Total (\$)	Percentage of Subtotal (%)	Total	Percentage of Subtotal (%)	Total			
North System										
Miami Upstream Channel	41	\$ 20,000	\$ 820,000	20%	\$ 866,000	15%	\$ 649,000	\$ 2,335,000	\$ 6,661,000	
Miami Channel Downstream	19	\$ 20,000	\$ 380,000	20%	\$ 255,000	15%	\$ 191,000	\$ 826,000	\$ 2,098,000	
Shiprock Channel	9	\$ 20,000	\$ 180,000	20%	\$ 108,000	15%	\$ 81,000	\$ 369,000	\$ 908,000	
Capitol Berm	1	\$ 20,000	\$ 20,000	20%	\$ 14,000	15%	\$ 11,000	\$ 45,000	\$ 115,000	
Total	70	\$ 1,400,000	\$ 1,243,000		\$ 932,000		\$ 3,575,000	\$ 9,782,000		
Central System										
Sunny Sands Channel	8	\$ 20,000	\$ 160,000	20%	\$ 71,000	15%	\$ 53,000	\$ 284,000	\$ 635,000	
Edna Upstream Channel	10	\$ 20,000	\$ 200,000	20%	\$ 109,000	15%	\$ 82,000	\$ 200,000	\$ 934,000	
Edna Downstream Channel	12	\$ 20,000	\$ 240,000	20%	\$ 112,000	15%	\$ 84,000	\$ 436,000	\$ 994,000	
Loring Channel	30	\$ 20,000	\$ 600,000	20%	\$ 669,000	15%	\$ 502,000	\$ 1,771,000	\$ 5,112,000	
Kathydid Berm	0	\$ 20,000	\$ -	20%	\$ 72,000	15%	\$ 54,000	\$ 126,000	\$ 482,000	
Wicker Berm	0	\$ 20,000	\$ -	20%	\$ 50,000	15%	\$ 38,000	\$ 88,000	\$ 335,000	
Quirkie Lake	0	\$ 20,000	\$ -	20%	\$ 767,000	15%	\$ 576,000	\$ 1,343,000	\$ 5,178,000	
Total	60	\$ 1,200,000	\$ 1,850,000		\$ 1,389,000		\$ 4,439,000	\$ 13,671,000		
South System										
McCombs Upstream Channel	7	\$ 20,000	\$ 140,000	20%	\$ 101,000	15%	\$ 76,000	\$ 317,000	\$ 813,000	
McCombs Downstream Channel	14	\$ 20,000	\$ 280,000	20%	\$ 210,000	15%	\$ 158,000	\$ 645,000	\$ 1,698,000	
Prescott Anthony Channel	3	\$ 20,000	\$ 60,000	20%	\$ 73,000	15%	\$ 55,000	\$ 188,000	\$ 550,000	
Amparo Upstream Channel	7	\$ 20,000	\$ 140,000	20%	\$ 74,000	15%	\$ 56,000	\$ 270,000	\$ 640,000	
Amparo Downstream Channel	21	\$ 20,000	\$ 420,000	20%	\$ 243,000	15%	\$ 182,000	\$ 845,000	\$ 2,058,000	
Sand Dunes Berm	0	\$ 20,000	\$ -	20%	\$ 5,000	15%	\$ 4,000	\$ 9,000	\$ 33,000	
Lisa Pond	0	\$ 20,000	\$ -	20%	\$ 80,000	15%	\$ 60,000	\$ 140,000	\$ 536,000	
Playa 6 (Hermosa Pond)	0	\$ 20,000	\$ -	20%	\$ 7,000	15%	\$ 5,000	\$ 12,000	\$ 45,000	
Total	52	\$ 1,040,000	\$ 793,000		\$ 596,000		\$ 2,429,000	\$ 6,379,000		
Grand Total		\$ 3,640,000	\$ 3,886,000		\$ 2,917,000		\$ 10,443,000	\$ 29,832,000		

Proposed Improvements

North System

	CBC
Miami Upstream Channel	Height (ft)
Earthen Channel	2
Q100	2.5
Length	3
Top Width	3.5
Bottom	4
Height	5
Side Slope	5.5
Longitudinal Slope	From Conc
Volume	0.16%
Volume	281,478 cy
Volume	282,000 cy - rounded
Main Road Crossing (Low Water Crossing)	RCP
Quantity	diameter (in)
Width	7 ea
Length	24
Total LWC Length	36
	48
	60
	66
Driveway Crossing (Low Water Crossing)	Roadway (
Quantity	0 ea
Width	25 ft
Length	305 ft
Total LWC Length	Maximum c
Main Road Crossing (CBC)	Channel Depth
Quantity	7 ea
CBC height	4 ft
HW / D	2
Capacity	1.25
CBC width	30 cfs
Total CBC width	3
	4
	5
	6
Driveway Crossing (CBC)	Driveway (
Quantity	3 ea
CBC height	4 ft
HW / D	1.25
Capacity	30 cfs
CBC width	Maximum c
Total CBC width	Channel Depth
Gabions	2
Total Drop	2.5
Gabion Structures	3
Gabion length	4
Total gabion length	5
Total gabion length	6
Property (Top Width + 20) x Length	40.6 acre
	41 acre - rounded

Miami Downstream Channel

Earthen Channel

Q100	4216 cfs
Length	2571 ft
Top Width	285 ft
Bottom	245 ft
Height	5 ft
Side Slope	4:1
Longitudinal Slope	0.16%
Volume	126,169 cy
Volume	127,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	2 ea
Width	40 ft
Length	445 ft
Total LWC Length	890 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	325 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	2 ea
CBC height	4 ft
HW / D	1.25
Capacity	30 cfs
CBC width	150 ft
Total CBC width	300 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	4 ft
HW / D	1.25
Capacity	30 cfs
CBC width	150 ft
Total CBC width	0 ft

Gabions

Total Drop	6 ft
Gabion Structures	3 ea
Gabion length	285 ft
Total gabion length	855 ft
Total gabion length	900 ft - rounded

Property

(Top Width + 20) x Length

18.0 acre
19 acre - rounded

Shiprock Channel

Earthen Channel

Q100	313 cfs
Length	5,805 ft
Top Width	47 ft
Bottom	15 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.33%
Volume	26,660 cy
Volume	27,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	6 ea
Width	40 ft
Length	215 ft
Total LWC Length	1,290 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	75 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	6 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	120

Driveway Crossing (CBC)

Quantity	1 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	20 ft

Gabions

Total Drop	8 ft
Gabion Structures	4 ea
Gabion length	47 ft
Total gabion length	188 ft
Total gabion length	200 ft - rounded

Property

(Top Width + 20) x Length

8.9 acre
9 acre - rounded

Capitol Berm

Length	3,352 ft
Top Width	12 ft
Bottom Width	36 ft
Height	3 ft
Side Slope	4:1
Volume	8,939 cy
Volume	9,000 cy - rounded
Main Road Crossing	0 ea
Driveway Crossing	0 ea
Property	-2301 ft Owned by State of New Mexico
Bottom Width x Length	-803 ft required property
	0.7 acre
	1 acre - rounded

HW=rise (cfs/ft-span)	HW=rise+1 (cfs/ft-span)
8	13
11	17
15	21
19	26
23	30
37	51

Concrete Pipe design Manual, Fig 37

HW=rise (cfs)	HW=rise+1 (cfs)
14	22
38	55
80	105
175	220

(Low Water Crossing)

Grade of roadway will be assumed to be 3%

Max Slope	Slope Length	(2x)	
3%	67	140	Add bottom width to get
3%	83	170	the low
3%	100	200	water crossing
4%	100	200	length
5%	100	200	
6%	100	200	

(Low Water Crossing)

Grade of roadway will be assumed to be 6%

Max Slope	Slope Length	(2x)	
14%	14	30	Add bottom width to get
14%	18	40	the low
14%	21	50	water crossing
14%	29	60	length
14%	36	80	
14%	43	90	

Proposed Improvements

Central System

Sunny Sands Channel

Earthen Channel	
Q100	304 cfs
Length	4,760 ft
Top Width	46 ft
Bottom	14 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.33%
Volume	21,156 cy
Volume	22,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	3 ea
Width	40 ft
Length	214 ft
Total LWC Length	650 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	74 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	3 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	60 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	0 ft

Gabions

Total Drop	6 ft
Gabion Structures	3 ea
Gabion length	46 ft
Total gabion length	138 ft
Total gabion length	200 ft - rounded

Property

(Top Width + 20) x Length

7.2 acre
8 acre - rounded

Edna Upstream Channel

Earthen Channel

Q100	732 cfs
Length	4,246 ft
Top Width	82 ft
Bottom	50 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.26%
Volume	41,516 cy
Volume	42,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	4 ea
Width	40 ft
Length	250 ft
Total LWC Length	1,000 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	110 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	4 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	40 ft
Total CBC width	160 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	40 ft
Total CBC width	0 ft

Gabions

Total Drop	2 ft
Gabion Structures	1 ea
Gabion length	82 ft
Total gabion length	82 ft
Total gabion length	100 ft - rounded

Property

(Top Width + 20) x Length

9.9 acre
10 acre - rounded

Edna Downstream Channel

Earthen Channel

Q100	1237 cfs
Length	4,652 ft
Top Width	89 ft
Bottom	41 ft
Height	6 ft
Side Slope	4:1
Longitudinal Slope	0.16%
Volume	67,196 cy
Volume	68,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	1 ea
Width	40 ft
Length	241 ft
Total LWC Length	250 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	131 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	1 ea
CBC height	5 ft
HW / D	1.20
Capacity	41 cfs
CBC width	40 ft
Total CBC width	40 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	5 ft
HW / D	1.20
Capacity	41 cfs
CBC width	40 ft
Total CBC width	0 ft

Gabions

Total Drop	4 ft
Gabion Structures	2 ea
Gabion length	89 ft
Total gabion length	178 ft
Total gabion length	200 ft - rounded

Property

(Top Width + 20) x Length

11.6 acre
12 acre - rounded

Lorraine Channel

Earthen Channel

Q100	3701 cfs
Length	6,546 ft
Top Width	258 ft
Bottom	218 ft
Height	5 ft
Side Slope	4:1
Longitudinal Slope	0.15%
Volume	288,509 cy
Volume	289,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	1 ea
Width	40 ft
Length	418 ft
Total LWC Length	420 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	298 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	1 ea
CBC height	4 ft
HW / D	1.25
Capacity	30 cfs
CBC width	130 ft
Total CBC width	130 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	4 ft
HW / D	1.25
Capacity	30 cfs
CBC width	130 ft
Total CBC width	0 ft

Gabions

Total Drop	42 ft
Gabion Structures	21 ea
Gabion length	258 ft
Total gabion length	5,418 ft
Total gabion length	5,500 ft - rounded

Property -2,000 ft on Dona Ana County Property

(Top Width + 20) x (Length - 2,000)

29.0 acre
30 acre - rounded

Quantities of Katydid Berm and Culverts Across Lisa Road are summarized below.

Culverts Across Lisa Road

Five 48" culverts will be needed to cross Lisa Road along Katydid Berm
Assume roadway will be built up to cross over culverts and berm
Assume 75 ft culvert length will be needed cross roadway

Length	75 ft
Quantity	5 ea
Total	375 ft

Material required to construct ramps over culverts

Length	400 ft
Width	75 ft
Height	6 ft
Volume	6667 cy
Volume	7000 cy-rounded

Property - Lisa Road Easement
Bottom Width x Length

-	ac
-	ac - rounded

Katydid Berm

Length	3,628 ft
Top Width	12 ft
Bottom Width	60 ft
Height	6 ft
Side Slope	4:1
Volume	29,024 cy
Volume	30,000 cy - rounded

Main Road Crossing	0 ea
Driveway Crossing	0 ea

Property - Property of the BLM
Bottom Width x Length

-	ac
-	ac - rounded

Quantity Summary for Katydid Berm and Culverts Across Lisa Road

Culvert Length	375 ft
Earthwork total	37,000 cy
Property	- ac

Wicker Berm

Length	1,643 ft
Top Width	12 ft
Bottom Width	92 ft
Height	10 ft
Side Slope	4:1
Volume	31,643 cy
Volume	32,000 cy - rounded

Main Road Crossing	0 ea
Driveway Crossing	0 ea

Property - Property of the BLM

Bottom Width x Length	- acre
	- acre - rounded

Quirke Lake

Area	60 acre
Height	6 ft
Side Slope	4:1
Volume	580,800 cy
Volume	581,000 cy - rounded

Main Road Crossing	0 ea
Driveway Crossing	0 ea

Property -Excavate existing facility

Bottom Width x Length	- acre
	- acre - rounded

CBC

Height (ft)	HW=rise (cfs/ft-span)	HW=rise+1 (cfs/ft-span)
2	8	13
2.5	11	17
3	15	21
3.5	19	26
4	23	30
5	33	41
5.5	37	51

From Concrete Pipe design Manual, Fig 37

RCP

diameter (in)	HW=rise (cfs)	HW=rise+1 (cfs)
24	14	22
36	38	55
48	80	105
60		
66	175	220

Roadway (Low Water Crossing)

Maximum grade of roadway will be assumed to be 3%

Channel Depth	Max Slope	Slope Length	(2x)	
2	3%	67	140	Add bottom
2.5	3%	83	170	width to get
3	3%	100	200	the low
4	4%	100	200	water crossing
5	5%	100	200	length
6	6%	100	200	

Driveway (Low Water Crossing)

Maximum grade of roadway will be assumed to be 6%

Channel Depth	Max Slope	Slope Length	(2x)	
2	14%	14	30	Add bottom
2.5	14%	18	40	width to get
3	14%	21	50	the low
4	14%	29	60	water crossing
5	14%	36	80	length
6	14%	43	90	

Proposed Improvements South System

McCombs Upstream Channel

Earthen Channel	
Q100	332 cfs
Length	4,367 ft
Top Width	49 ft
Bottom	17 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.31%
Volume	21,350 cy
Volume	22,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	4 ea
Width	40 ft
Length	217 ft
Total LWC Length	870 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	77 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	4 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	80 ft

Driveway Crossing (CBC)

Quantity	0 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	0 ft

Gabions

Total Drop	22 ft
Gabion Structures	11 ea
Gabion length	49 ft
Total gabion length	539 ft
Total gabion length	600 ft - rounded

Land Acquisition

(Top Width + 20) x Length

6.9 acre
7 acre - rounded

McCombs Downstream Channel

Earthen Channel

Q100	332 cfs
Length	5,157 ft
Top Width*	96 ft
Bottom	24 ft
Height*	9 ft
Side Slope	4:1
Longitudinal Slope	0.19%
Volume	103,140 cy
Volume	104,000 cy - rounded

Main Road Crossing (Low Water Crossing)*

Quantity	4 ea
Width	40 ft
Length	224 ft
Total LWC Length	900 ft

Driveway Crossing (Low Water Crossing)*

Quantity	0 ea
Width	25 ft
Length	84 ft
Total LWC Length	0 ft

Main Road Crossing

Quantity	4 ea
CBC height*	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	80 ft

Driveway Crossing

Quantity	6 ea
CBC height*	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	20 ft
Total CBC width	120 ft

Gabions

Total Drop	6 ft
Gabion Structures	3 ea
Gabion length	200 ft
Total gabion length	600 ft
Total gabion length	600 ft - rounded

Land Acquisition

(Top Width + 20) x Length

13.7 acre
14 acre - rounded

* McCombs Channel Downstream connects Paloma Pond and Hermosa Pond by passing through the raise in elevation that separates them. Average channel depth of 9 ft was used to account for the additional average of 5' of excavation depth that is needed to construct the channel from Paloma Pond to Hermosa Pond. Actual channel depth needed to contain the flow is 4 ft including freeboard.

Prescott Anthony Channel

Earthen Channel

Q100	160 cfs
Length	3,235 ft
Top Width	42 ft
Bottom	10 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.14%
Volume	12,461 cy
Volume	13,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	4 ea
Width	40 ft
Length	210 ft
Total LWC Length	840 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	70 ft
Total LWC Length	0 ft

Main Road Crossing

Quantity	4 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	10 ft
Total CBC width	40 ft

Driveway Crossing

Quantity	2 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	10 ft
Total CBC width	20 ft

Gabions

Total Drop	12 ft
Gabion Structures	6 ea
Gabion length	42 ft
Total gabion length	252 ft
Total gabion length	300 ft - rounded

Land Acquisition -1,320 ft on Gadsden School District property

(Top Width + 20) x Length

2.7 acre
3 acre - rounded

Amparo Upstream Channel

Earthen Channel

Q100	508 cfs
Length	3,420 ft
Top Width	63 ft
Bottom	31 ft
Height	4 ft
Side Slope	4:1
Longitudinal Slope	0.28%
Volume	23,813 cy
Volume	24,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	2 ea
Width	40 ft
Length	231 ft
Total LWC Length	470 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	91 ft
Total LWC Length	0 ft

Main Road Crossing

Quantity	2 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	30 ft
Total CBC width	60 ft

Driveway Crossing

Quantity	3 ea
CBC height	3 ft
HW / D	1.33
Capacity	21 cfs
CBC width	30 ft
Total CBC width	90 ft

Gabions

Total Drop	10 ft
Gabion Structures	5 ea
Gabion length	63 ft
Total gabion length	315 ft
Total gabion length	400 ft - rounded

Land Acquisition

(Top Width + 20) x Length

6.5 acre
7 acre - rounded

Amparo Downstream Channel

Earthen Channel

Q100	1118 cfs
Length	8,300 ft
Top Width	86 ft
Bottom	38 ft
Height	6 ft
Side Slope	4:1
Longitudinal Slope	0.15%
Volume	114,356 cy
Volume	115,000 cy - rounded

Main Road Crossing (Low Water Crossing)

Quantity	7 ea
Width	40 ft
Length	238 ft
Total LWC Length	1,670 ft

Driveway Crossing (Low Water Crossing)

Quantity	0 ea
Width	25 ft
Length	128 ft
Total LWC Length	0 ft

Main Road Crossing (CBC)

Quantity	7 ea
CBC height	5 ft
HW / D	1.20
Capacity	41 cfs
CBC width	30 ft
Total CBC width	210 ft

Driveway Crossing (CBC)

Quantity	1 ea
CBC height	5 ft
HW / D	1.20
Capacity	41 cfs
CBC width	30 ft
Total CBC width	30 ft

Gabions

Total Drop	4 ft
Gabion Structures	2 ea
Gabion length	86 ft
Total gabion length	172 ft
Total gabion length	200 ft - rounded

Land Acquisition

(Top Width + 20) x Length

20.2 acre
21 acre - rounded

Sand Dunes Berm

Length	900 ft
Top Width	12 ft
Bottom Width	36 ft
Height	3 ft
Side Slope	4:1
Volume	2,400 cy
Volume	3,000 cy - rounded
Main Road Crossing	0 ea
Driveway Crossing	0 ea
Land Acquisition	- Property of the BLM
Bottom Width x Length	<ul style="list-style-type: none"> - ac - ac - rounded

Lisa Pond

Area	3.46 acre
Height	12 ft
Side Slope	4:1
Required Pond Volume	41 acre-ft
Existing Pond Volume	4 acre-ft
Increased pond Volume	37 acre-ft
Volume	59,693 cy
Volume	60,000 cy - rounded
Main Road Crossing	0 ea
Driveway Crossing	0 ea
Land Acquisition	- Property of the BLM and Dona Ana County
Bottom Width x Length	<ul style="list-style-type: none"> - acre - acre - rounded

Playa 6 (Hermosa Pond)

Increased pond Volume	3 acre-ft
Volume	4,840 cy
Volume	5,000 cy - rounded
Main Road Crossing	0 ea
Driveway Crossing	0 ea
Land Acquisition	- Property of Dona Ana County
Bottom Width x Length	<ul style="list-style-type: none"> - acre - acre - rounded

CBC

Height (ft)	HW=rise (cfs/ft-span)	HW=rise+1 (cfs/ft-span)
2	8	13
2.5	11	17
3	15	21
3.5	19	26
4	23	30
5	33	41
5.5	37	51

From Concrete Pipe design Manual, Fig 37

RCP

diameter (in)	HW=rise (cfs)	HW=rise+1 (cfs)
24	14	22
36	38	55
48	80	105
60		
66	175	220

Roadway (Low Water Crossing)

Maximum grade of roadway will be assumed to be 3%

Channel Depth	Max Slope	Slope Length	(2x)	
2	3%	67	140	Add bottom
2.5	3%	83	170	width to get
3	3%	100	200	the low
4	4%	100	200	water crossing
5	5%	100	200	length
6	6%	100	200	

Driveway (Low Water Crossing)

Maximum grade of roadway will be assumed to be 6%

Channel Depth	Max Slope	Slope Length	(2x)	
2	14%	14	30	Add bottom
2.5	14%	18	40	width to get
3	14%	21	50	the low
4	14%	29	60	water crossing
5	14%	36	80	length
6	14%	43	90	

Low Water Crossing

Quantity and Cost

Calculated per linear foot of low water crossing

Quantity

Upstream cut off wall:	$1' \times 2' \times 1' = 0.07 \text{ cy}$
Downstream cut off wall:	$1' \times 4' \times 1' = 0.15 \text{ cy}$
Surface Roadway	$38' \times 1' = 4.22 \text{ sy}$
Surface Driveway	$23' \times 1' = 2.55 \text{ sy}$
Reinforcing (#4 bar)	$8' \times 1' = 8 \text{ lf}$
Reinforcing (490 lbs/cf)	$0.2 \text{ si} \times 8' (12 \text{ in}/\text{ft}) \times 490 \text{ lbs}/\text{cf} / 1728 \text{ ci}/\text{cf} = 5.4 \text{ lb}$
Concrete quantity for Roadway	0.22 cy
Base Course/ Misc. Paving quantity for Roadway	4.22 sy
Base Course/ Misc. Paving quantity for Driveway	2.55 sy

Approach and Departure Slope Length

Roadway

Assume speed to be 35 mph w/ Ksag of 49 (1) and Kcrest of 20 (2) (Ksag 29 (1))
(1) 2004 AASHTO - Geometric Design of Highways and Streets
(2) 2001 AASHTO - Geometric Desing of Very Low-Volume Roads

Maximum grade of roadway will be assumed to be 3%

Channel Depth	Max Slope	Slope Length	(2x)
2	3%	67	140
2.5	3%	83	170
3	3%	100	200
4	4%	100	200
5	5%	100	200
6	6%	100	200

Driveway

Maximum grade of roadway will be assumed to be 6%

Channel Depth	Max Slope	Slope Length	(2x)
2	14%	14	30
2.5	14%	18	40
3	14%	21	50
4	14%	29	60
5	14%	36	80
6	14%	43	90

Roadway

Asssume 40 ft width

Per Linear Ft

	qty	unit cost	cost per ft
Concrete	0.22 CY	\$ 520.00	\$ 114.40
Reinforcing	5.4 LB	\$ 2.00	\$ 10.80
Base Course	4.22 SY	\$ 8.00	\$ 33.76
Misc Paving	4.22 SY	\$ 13.00	\$ 54.86
	Total		<u>\$ 214</u>
	Rounded		<u><u>\$ 220</u></u>

Driveway

Assume 25 ft width

Per Linear Ft

	qty	unit cost	cost per ft
Concrete	0.22 CY	\$ 520.00	\$ 114.40
Reinforcing	5.4 LB	\$ 2.00	\$ 10.80
Base Course	2.55 SY	\$ 8.00	\$ 20.40
Misc Paving	2.55 SY	\$ 13.00	\$ 33.15
	Total		<u>\$ 179</u>
	Rounded		<u><u>\$ 180</u></u>

For S=4 ft, H = 2 ft

Inside span, S = 4 48 in
 Inside height, H = 2 24 in

Top slab thickness, TT = 7.5 in
 Bottom slab thickness, TB = 8.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 1368 in²
 9.5 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	4	0.2	12	1	59	11.8	2	23.6
"cc" bars	4	0.2	6	2	59	23.6	1	23.6
"dd" bars	4	0.2	6	2	59	23.6	1	23.6
"ff" bars	4	0.2	12	1	35	7	2	14
"hh" bars	4	0.2	6	2	50	20	4	80

Length "CH" = 25 in
 Length "CV" = 25 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.2	6	11	12	26.4	2	52.8
"kk" bars	4	0.2	6	7	12	16.8	2	33.6

Total volume, rebar = 251.2 in³/ft
 0.145 ft³/ft

Total weight, rebar = 71.2 lbs/ft

Total volume, concrete = 9.4 ft³/ft
 0.3 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	7.3 in ³
Total weight, rebar =	3562 lbs
Total volume, concrete =	468 ft ³
	17.3 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	1.8 in ³ /ft
Total weight, rebar =	890 lbs/ft
Total volume, concrete =	117 ft ³ /ft
	4.3 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$1,100	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,300	Cost of concrete* =	519.68 \$/yd3
Total cost =	\$3,400		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$600
Total cost, concrete =	\$1,200
Total cost =	\$1,800

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"

For S=4 ft, H = 4 ft

Inside span, S = 4 48 in
 Inside height, H = 4 48 in

Top slab thickness, TT = 7.5 in
 Bottom slab thickness, TB = 8.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 1728 in²
 12 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	4	0.2	12	1	59	11.8	2	23.6
"cc" bars	4	0.2	6	2	59	23.6	1	23.6
"dd" bars	4	0.2	6	2	59	23.6	1	23.6
"ff" bars	4	0.2	12	1	59	11.8	2	23.6
"hh" bars	4	0.2	6	2	62	24.8	4	99.2

Length "CH" = 25 in
 Length "CV" = 37 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.2	6	11	12	26.4	2	52.8
"kk" bars	4	0.2	6	11	12	26.4	2	52.8

Total volume, rebar = 299.2 in³/ft
 0.173 ft³/ft

Total weight, rebar = 84.8 lbs/ft

Total volume, concrete = 11.8 ft³/ft
 0.4 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	8.7 in ³
Total weight, rebar =	4242 lbs
Total volume, concrete =	591 ft ³
	21.9 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	2.2 in ³ /ft
Total weight, rebar =	1061 lbs/ft
Total volume, concrete =	148 ft ³ /ft
	5.5 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$1,200	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,900	Cost of concrete* =	519.68 \$/yd3
Total cost =	\$4,100		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$600
Total cost, concrete =	\$1,500
Total cost =	\$2,100

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"

For S=10 ft, H = 3 ft

Inside span, S = 10 120 in
 Inside height, H = 3 36 in

Top slab thickness, TT = 9 in
 Bottom slab thickness, TB = 9.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 3037.5 in²
 21.1 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	7	0.60	12	1	131	78.6	2	157.2
"cc" bars	8	0.79	6	2	131	206.98	1	206.98
"dd" bars	8	0.79	6	2	131	206.98	1	206.98
"ff" bars	4	0.20	12	1	49	9.8	2	19.6
"hh" bars	7	0.60	6	2	81	97.2	4	388.8

Length "CH" = 43 in
 Length "CV" = 38 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.20	6	23	12	55.2	2	110.4
"kk" bars	4	0.20	6	10	12	24	2	48

Total volume, rebar = 1137.96 in³/ft
 0.659 ft³/ft

Total weight, rebar = 322.7 lbs/ft

Total volume, concrete = 20.4 ft³/ft
 0.8 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	32.9 in ³
Total weight, rebar =	16134 lbs
Total volume, concrete =	1022 ft ³ 37.8 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	3.3 in ³ /ft
Total weight, rebar =	1613 lbs/ft
Total volume, concrete =	102 ft ³ /ft
	3.8 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$1,900	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,000	Cost of concrete* =	519.68 \$/yd3
Total cost =	\$3,900		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$1,000
Total cost, concrete =	\$1,000
Total cost =	\$2,000

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"

For S=10 ft, H = 4 ft

Inside span, S = 10 120 in
 Inside height, H = 4 48 in

Top slab thickness, TT = 9 in
 Bottom slab thickness, TB = 9.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 3217.5 in²
 22.3 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	7	0.60	12	1	131	78.6	2	157.2
"cc" bars	8	0.79	6	2	131	206.98	1	206.98
"dd" bars	8	0.79	6	2	131	206.98	1	206.98
"ff" bars	4	0.20	12	1	61	12.2	2	24.4
"hh" bars	7	0.60	6	2	87	104.4	4	417.6

Length "CH" = 43 in
 Length "CV" = 44 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.20	6	23	12	55.2	2	110.4
"kk" bars	4	0.20	6	12	12	28.8	2	57.6

Total volume, rebar = 1181.16 in³/ft
 0.684 ft³/ft

Total weight, rebar = 334.9 lbs/ft

Total volume, concrete = 21.7 ft³/ft
 0.8 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	34.2 in ³
Total weight, rebar =	16747 lbs
Total volume, concrete =	1083 ft ³ 40.1 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	3.4 in ³ /ft
Total weight, rebar =	1675 lbs/ft
Total volume, concrete =	108 ft ³ /ft
	4.0 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$1,900	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,100	Cost of concrete* =	519.68 \$/yd3
Total cost =	\$4,000		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$1,000
Total cost, concrete =	\$1,100
Total cost =	\$2,100

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"

For S=10 ft, H = 5 ft

Inside span, S = 10 120 in
 Inside height, H = 5 60 in

Top slab thickness, TT = 9 in
 Bottom slab thickness, TB = 9.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 3397.5 in²
 23.6 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	7	0.60	12	1	131	78.6	2	157.2
"cc" bars	8	0.79	6	2	131	206.98	1	206.98
"dd" bars	8	0.79	6	2	131	206.98	1	206.98
"ff" bars	4	0.20	12	1	61	12.2	2	24.4
"hh" bars	7	0.60	6	2	93	111.6	4	446.4

Length "CH" = 43 in
 Length "CV" = 50 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.20	6	23	12	55.2	2	110.4
"kk" bars	4	0.20	6	14	12	33.6	2	67.2

Total volume, rebar = 1219.56 in³/ft
 0.706 ft³/ft

Total weight, rebar = 345.8 lbs/ft

Total volume, concrete = 22.9 ft³/ft
 0.8 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	35.3 in ³
Total weight, rebar =	17291 lbs
Total volume, concrete =	1144 ft ³ 42.4 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	3.5 in ³ /ft
Total weight, rebar =	1729 lbs/ft
Total volume, concrete =	114 ft ³ /ft
	4.2 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$2,000	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,300	Cost of concrete* =	519.68 \$/yd3
Total cost =	\$4,300		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$1,000
Total cost, concrete =	\$1,200
Total cost =	\$2,200

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"

For S=10 ft, H = 6 ft

Inside span, S = 10 120 in
 Inside height, H = 6 72 in

Top slab thickness, TT = 9 in
 Bottom slab thickness, TB = 9.5 in
 Outer wall thickness, OW = 7.5 in

Area of concrete cross-section = 3577.5 in²
 24.8 ft²

Culvert - quantities per 1 foot of length

For Lateral rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars per foot	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"bb" bars	7	0.60	12	1	131	78.6	2	157.2
"cc" bars	8	0.79	6	2	131	206.98	1	206.98
"dd" bars	8	0.79	6	2	131	206.98	1	206.98
"ff" bars	4	0.20	12	1	85	17	2	34
"hh" bars	7	0.60	6	2	99	118.8	4	475.2

Length "CH" = 43 in
 Length "CV" = 56 in

For Logitudinal rebar:

	Bar number	Cross sectional area (in ²)	spacing (in)	Bars in cross section	Length (in)	Vol, per linear foot (in ³ /ft)	Locations each	Vol, per linear foot (in ³ /ft)
"jj" bars	4	0.20	6	23	12	55.2	2	110.4
"kk" bars	4	0.20	6	16	12	38.4	2	76.8

Total volume, rebar = 1267.56 in³/ft
 0.734 ft³/ft

Total weight, rebar = 359.4 lbs/ft

Total volume, concrete = 24.1 ft³/ft
 0.9 cy

Unit weight of rebar assumed to be
 490 lbs/ft³

Culvert - Quantities for 50 foot length

Length =	50
Total volume, rebar =	36.7 in ³
Total weight, rebar =	17972 lbs
Total volume, concrete =	1206 ft ³ 44.6 yd ³

Across 50' Roadway Width, Per Foot of Culvert Width

Total volume, rebar =	3.7 in ³ /ft
Total weight, rebar =	1797 lbs/ft
Total volume, concrete =	121 ft ³ /ft
	4.5 yd ³ /ft

Cost Per Foot of Culvert Width, Across 50' Roadway Width

Total cost, rebar =	\$2,100	Cost of rebar* =	1.13 \$/lb
Total cost, concrete =	\$2,400	Cost of concrete* =	519.68 \$/yd ³
Total cost =	\$4,500		

Cost Per Foot of Culvert Width, Across 25' Roadway Width

Total cost, rebar =	\$1,100
Total cost, concrete =	\$1,200
Total cost =	\$2,300

*Unit prices from "NMDOT - Average Unit Bid Prices, July 2006 - June 2007, Major Items"



Date: September 10, 2007 **DRAFT**

Project: Chaparral Master Drainage Plan

Subject: Summary of Public Involvement Meeting
September 6, 2007

Prepared for: URS under contract with
Doña Ana County Flood Commission

Prepared by: Denise Weston, Taschek Environmental Consulting

Location: Chaparral High School
800 County Line Road
Chaparral, New Mexico

Time: 6:30pm – 8:30pm

Project Team Members Present

Tish Segovia, DAC Flood Commission
Robert Armijo, DAC Engineering
Mike Gallagher, DAC Planning
Karen Burt, URS
Matt Moore, URS
Dex Lewis, URS
Denise Weston, Taschek Environmental Consulting

Meeting Attendees

In addition to project team members, approximately 32 member of the public attended the meeting. Attached is a spreadsheet identifying all meeting attendees.

Summary of Meeting

The meeting began with an introduction on the history and purpose of the Chaparral Master Drainage Plan by Tish Segovia. Karen Burt followed with a project overview including information on the schedule. Dex Lewis provided details on the analysis portion of the project and described the mapping used to evaluate potential drainage issues. Denise Weston concluded the presentation with a request for public input. Louis Luna served as the translator for the meeting.

Following the presentation, an opportunity for questions and comments was offered to the attendees. Several questions were asked and are summarized below:

- 1) A resident stated that there is concern that the installation of a Qwest cable has caused drainage blockage along Hot Peppers Road. Robert Armijo with the DAC stated that he would look into the issue.
- 2) A resident stated that there were ponding issues on Quiet Pine Road between Laura and DeLora. The resident was thanked for providing a great example of the input requested.
- 3) The question was asked if any representatives or legislators would be involved in this specific project. It was stated that there was political support and involvement for the project. At the same time, Commissioner Caviness was welcomed to the meeting. Karen Burt explained that the study results would be presented to the County Commission upon completion.
- 4) A question was asked as to the project boundaries. Tish Segovia explained that water does not contain itself within municipal boundaries but the study is primarily limited to Chaparral, within Doña Ana County.
- 5) A resident questioned if the flood plain maps shown at the meeting were official? Karen Burt explained that the maps had not been officially accepted by FEMA. They were, however, the most current data and were the maps being used for the project analysis.
- 6) A resident asked what benefit it would be to those that live in Otero County. Tish Segovia explained that although the project is primarily based in Doña Ana County any input provided by those that live in Otero County would help them understand the overall drainage issues.
- 7) The resident further questioned why Otero County was not included in the study? Tish Segovia explained that the money was specifically appropriated for the community of Chaparral in Doña Ana County.

As part of the closing comments, Commissioner Caviness thanked everyone for attending and encouraged continued public input on the project. Denise Weston explained that everyone that attended the meeting would receive a direct mail invite to the next meeting on the Chaparral Drainage Master Plan.

Discussion Period

Following the question and answer period, the residents provided input individually at the maps and continued discussions with the study team members present. Comments received during the informal discussion period are summarized below:

Comments received by Denise Weston:

- Maintenance issues are a big concern.
- Drainage problems could be improved with better maintenance of existing infrastructure.
- Canal areas need proper mowing to function efficiently.
- Road construction is a problem.
- Shoulders wash-out leaving a dangerous drop-off area.
- Roads are constructed higher than the properties causing flooding directly into homes.

Additional comments received during the discussion session are summarized in the attached Community Meeting Notes graphic.

Written Comments

As of November 12, 2007, no additional written comments have been received.

Attachments

Meeting Agenda

Meeting Advertising

Meeting attendees

Community Meeting Notes



Chaparral Drainage Master Plan

Public Meeting No. 1

September 6, 2007

Agenda

1. Introductions, Tish Segovia
 - a. Officials
 - b. Presenters
 - c. Project History
 - d. Project Funding
 2. Project Overview, Karen Burt
 - a. Scope
 - b. Schedule
 3. Technical Approach, Dex Lewis
 4. Comments, Denise Weston
 - a. From Participants, Group and Individual
 - b. Comment Form, Now or Later
-

1. Introducciones, Tish Segovia
 - a. Oficiales
 - b. Presentadores
 - c. Historia del Proyecto
 - d. Fondos para el Proyecto
2. Sobrevisita del Proyecto, Karen Burt
 - a. Alcance
 - b. Programación
3. Acercamiento Técnico, Dex Lewis
4. Comentarios, Denise Weston
 - a. De los participantes, del Grupo, Individuales
 - b. Forma de Comentarios, Hoy o Despues

DOÑA ANA COUNTY FLOOD COMMISSION
invites you to attend a
Public Meeting
on the proposed improvements included in the
Chaparral Drainage Master Plan

DATE: Thursday,
September 6, 2007

TIME: 6:30 – 7:30 pm

PLACE: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



Doña Ana County Flood Commission is preparing a drainage master plan for the community of Chaparral, New Mexico. This public meeting is the first in a series of three public meetings that will be held on the master plan. It is a great opportunity for you to gather information, ask questions, and provide input. Everyone is encouraged to attend!

General questions about the project should be directed to:

- Leticia Segovia, DAC- (505) 525-5554 / leticias@donaanacounty.org

DOÑA ANA COUNTY FLOOD COMMISSION

Le Invita atentamente a Usted a asistir a una
Reunión de Participación Ciudadana

En la que se discutirán las propuestas de mejoramientos
incluidos en

El Plan Principal del Drenaje de Chaparral

FECHA: Jueves
6 de septiembre de 2007

HORA: 6:30 – 7:30 pm

LUGAR: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



El Doña Ana County Flood Commission esta preparando un plan principal para el drenaje de la comunidad de Chaparral, Nuevo México. Esta reunión pública es la primera en una serie de tres reuniones públicas que habrá sobre el plan principal. Le exhortamos a que asista a esta reunión para recibir información, expresar su opinión, y hacer preguntas.

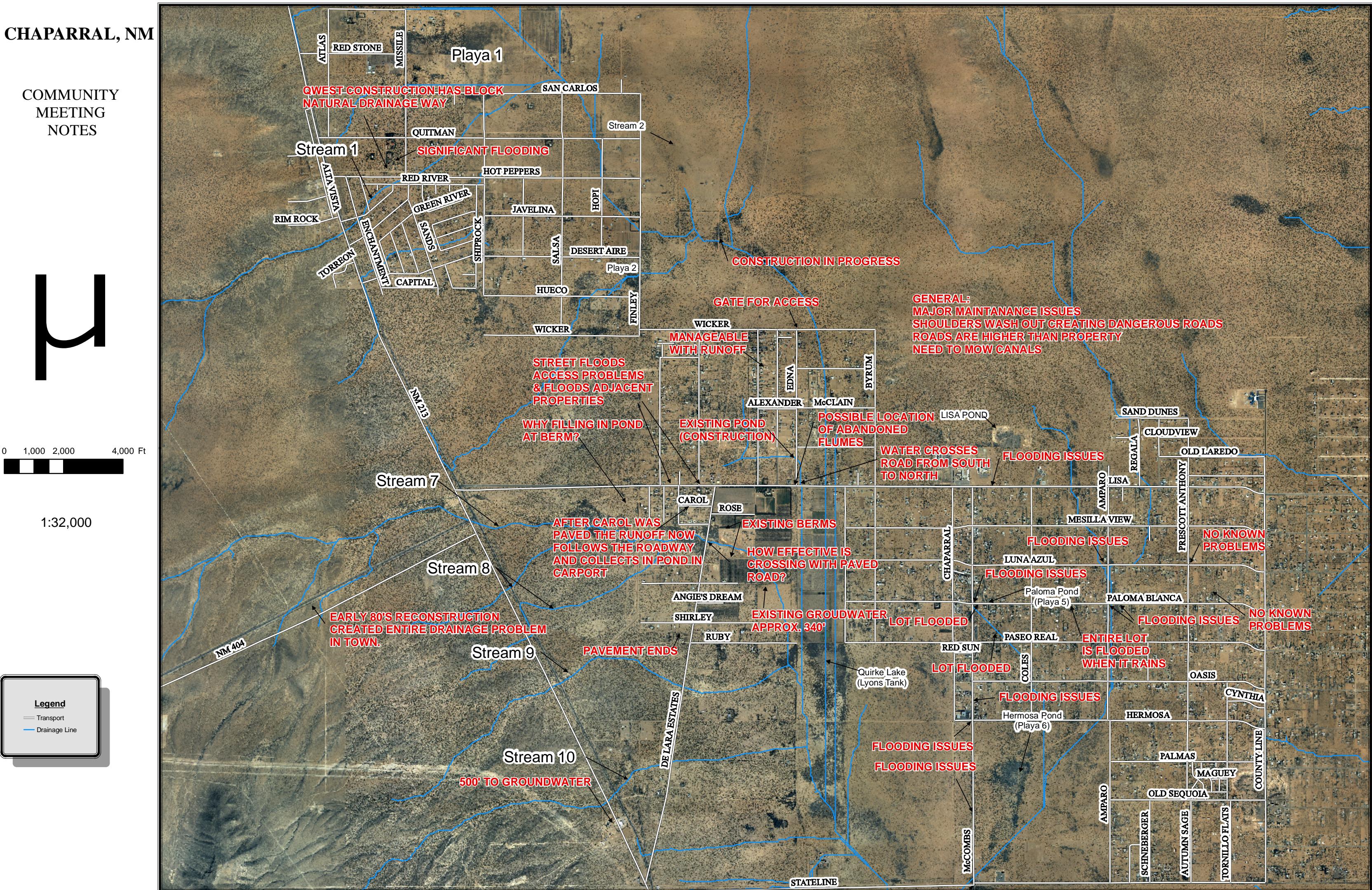
Preguntas generales, por favor comuníquese con:

- Leticia Segovia, DAC – (505) 525-5554 / leticias@donaanacounty.org

Chaparral Master Drainage Plan /		
Public Meeting One / September 6, 2007		
Flyer Delivery List -any additional locations are great		
Business	Address	Phone
Chaparral Shamrock	513 McCombs Rd	824-4767
Stires FINA Station	550 E. Lisa Drive	824-3462
R & R Grocery/ Store	636 Rosecrans Rd	
Mia's Pizzeria	300 McCombs Rd	824-0424
Tortilleria Susy	661 Paloma Blanca Drive	824-9377
R & J Mexican Take Out	100 E. Lisa Drive	824-3701
El Bayo Steak House	417 Chaparral Drive	824-4749
Azteca Restaurant	431 McCombs	824-0998
Stires Super Market	West side of McCombs/north of State Line Drive	
Churches -		
PLEASE ask to announce at services this week & post if possible		
First Baptist Church	401 El Paseo Real Drive / Near Coles Drive	824-4500
Chaparral Church of Christ	700 Amador Drive / corner of S. County Line Drive	824-4772
St. Thomas More Catholic Church	568 E. Lisa Drive	824-4433
Jehovah Witness Kingdom	E. Lisa Drive / between Rosecrans and Kimbrough	824-0008
Iglesia Emmanuel	Calle de Madero / between Sylvia and Irma	824-0091

CHAPARRAL, NM

COMMUNITY MEETING NOTES





Date: November 14, 2007 **DRAFT**

Project: Chaparral Master Drainage Plan

Subject: Summary of Public Involvement Meeting
November 13, 2007

Prepared for: URS under contract with
Doña Ana County Flood Commission

Prepared by: Brad Beacham, Taschek Environmental Consulting

Location: Chaparral High School
800 County Line Road
Chaparral, New Mexico

Time: 7:00pm – 8:15pm

Project Team Members Present

Tish Segovia, DAC Flood Commission
Jorge Granados, DAC Public Works Director
Karen Burt, URS
Matt Moore, URS
Dex Lewis, URS
Brad Beacham, Taschek Environmental Consulting

Meeting Attendees

In addition to project team members, approximately 20 members of the public attended the meeting. Attached is a spreadsheet identifying all meeting attendees.

Summary of Meeting

The meeting began with an introduction on the history and purpose of the Chaparral Master Drainage Plan by Tish Segovia. Karen Burt followed with a summary of the preliminary technical findings for the drainage characteristics of the area, and a discussion of the Drainage Master Plan Model, inclusive of the conceptual improvement alternatives. Karen Burt closed her discussion with an overview of the project schedule. Tish Segovia concluded the presentation with a summary of the public involvement program and a request for public input. Louis Luna served as the translator for the meeting.

During the course of the presentation, one question was asked. The question is summarized below:

- 1) *A resident questioned why drainage issues were not being addressed in adjacent areas of Otero County and Texas?* Tish Segovia answered, stating that this was a

jurisdictional issue and Dona Ana County did not have authority to extend beyond the county bounds.

Discussion Period

Following the presentation, an opportunity for questions and comments was offered to the attendees. This interactive session was conducted by breaking the project area into three stations: North, Central and South. Each station utilized conceptual mapping to illustrate the improvement alternatives. Attendees were given the opportunity to address specific concerns during the session, as well as provide general feedback for the alternatives using a color-coded sticker system. Feedback and comments received during the discussion session are summarized in the attached Community Meeting Notes graphic.

Comments received by Brad Beacham:

- Concern has been expressed by one resident over the timeline and available funding to meet the project goals. Specifically, how will projects within Dona Ana County and Chaparral be prioritized.
- One resident suggested soliciting help from the local community in order to gather an increasingly accurate rainfall data set for the modeling of the project area.
- One resident suggested completing a minimum of three analyses at 50 year increments of flooding based on the final drainage master plan.
- One resident suggested the potential usage of impounding areas during dry periods as a potential enhancement to the plan.

Written Comments

As of November 30, 2007, no additional written comments have been received.

Attachments

Meeting Advertising

Meeting Attendees

Community Meeting Notes



Chaparral Drainage Master Plan

Public Meeting No. 2

November 13, 2007

Agenda

1. Introductions, Tish Segovia
 - a. Officials
 - b. Presenters
 - c. Project History
 - d. Project Funding
 - e. Summary of Public Meeting No. 1
 2. Project Overview, Karen Burt
 - a. Existing Conditions
 - b. Alternative Improvements
 - c. Schedule
 3. Comments, Brad Beachum
 - a. From Participants, Group and Individual
 - b. Comment Form, Now or Later
-

1. Introducciones, Tish Segovia
 - a. Oficiales
 - b. Presentadores
 - c. Historia del Proyecto
 - d. Fondos para el Proyecto
 - e. Resumen de Junta Pública No. 1
2. Sobrevisita del Proyecto, Karen Burt
 - a. Condiciones existentes
 - b. Programaciones alternativas
 - c. Horario
3. Comentarios, Brad Beachum
 - a. De los participantes, Grupo, y Individuales
 - b. Forma de Comentarios, Al corriente o Futuro

DOÑA ANA COUNTY FLOOD COMMISSION
invites you to attend a
Public Meeting
on the proposed improvements included in the
Chaparral Drainage Master Plan

DATE: Tuesday,
November 13, 2007

TIME: 7:00 – 8:00 pm

PLACE: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



Doña Ana County Flood Commission is preparing a drainage master plan for the community of Chaparral, New Mexico. This public meeting is the second in a series of three public meetings that will be held on the master plan. It is a great opportunity for you to receive updates on the project, gather information, ask questions, and provide input. Everyone is encouraged to attend!

General questions about the project should be directed to:

- Leticia Segovia, DAC- (505) 525-5554 / leticias@donaanacounty.org

DOÑA ANA COUNTY FLOOD COMMISSION

Le Invita atentamente a Usted a asistir a una
Reunión de Participación Ciudadana

En la que se discutirán las propuestas de mejoramientos
incluidos en

El Plan Principal del Drenaje de Chaparral

FECHA: Martes
13 de noviembre de 2007

HORA: 7:00 – 8:00 pm

LUGAR: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



El Doña Ana County Flood Commission esta preparando un plan principal para el drenaje de la comunidad de Chaparral, Nuevo México. Esta reunión pública es la segunda en una serie de tres reuniones públicas que habrá sobre el plan principal. Le exhortamos a que asista a esta reunión para recibir cuenta del proyecto, expresar su opinión, y hacer preguntas.

Preguntas generales, por favor comuníquese con:

- Leticia Seaovia, DAC – (505) 525-5554 / leticias@donaanacounty.org

From Leticia Segovia <leticias@donaanacounty.org>
 To <dweston@taschek.net>, <Karen_Burt@URSCorp.com>, "Brad Beacham" <bbeacham@taschek.net>
 Subject FW: PUBLIC MEETING SLATED TO DISCUSS CHAPARRAL DRAINAGE MASTER PLAN

[Report as spam](#)

From: Paul Dugie
Sent: Monday, November 05, 2007 11:54 AM
To: Leticia Segovia
Subject: FW: PUBLIC MEETING SLATED TO DISCUSS CHAPARRAL DRAINAGE MASTER PLAN

FYI

From: Jess Williams
Sent: Monday, November 05, 2007 9:59 AM
Subject: PUBLIC MEETING SLATED TO DISCUSS CHAPARRAL DRAINAGE MASTER PLAN

FOR IMMEDIATE RELEASE

NOVEMBER 5, 2007

PUBLIC MEETING SLATED TO DISCUSS CHAPARRAL DRAINAGE MASTER PLAN

The Doña Ana County Flood Commission will hold a public meeting in Chaparral at 7 p.m. Tuesday, Nov. 13, 2007, to discuss problem flooding areas and sources, and to identify potential solutions for inclusion in the proposed Chaparral Drainage Master Plan. The meeting will be held at Chaparral High School, 800 County Line Road.

The Nov. 13 meeting is the second in a series of three public meeting designed to solicit input and concerns in advance of releasing a draft of the Chaparral Drainage Master Plan. The public is strongly encouraged to attend.

Simultaneous translation services will be provided on-site for each of the three meetings. For more information, call Leticia Segovia at the Doña Ana County Flood Commission, (505) 525-5554.

***** ***** ***** ***** ***** *****

Reporters seeking more information or interviews may call county Public Information Director Jess Williams at (505) 525-5801.

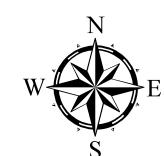
Chaparral Master Drainage Plan**Public Meeting #2****November 13, 2007****Attendees**

LastName	FirstName	Address	City	State	Zip
Moore	Hilda & Julia	621 Tumbleweed	Chaparral	NM	88081
Aldaz	Rey	612 Paloma Blanca	Chaparral	NM	88081
Denison	Mark & Cynthia	112 Lisa Dr., Bx 34	Chaparral	NM	88081
Garcia	Rosa Maria	500 Prescot	Chaparral	NM	88081
Colquitt	John	301 Paseo Real	Chaparral	NM	88081
Colquitt	Rachelle	301 Paseo Real	Chaparral	NM	88081
Bingham	Kelly	112 Lisa Dr., PMB	Las Cruces	NM	88001
McNight	Betty	153	Chaparral	NM	88081
Trejo	Alma D.	615 Tumbleweed	Chaparral	NM	88081
Sebastian	Fred		Chaparral	NM	88081
Ortiz	Robert	421 Geronimo Rd.	Chaparral	NM	88081
Still	Lucile	1040 Wagonmound	Chaparral	NM	88081
?	Mario	1040 Wagonmound	Chaparral	NM	88081
Mortis	Delia	662 Tumbleweed	Chaparral	NM	88081
Mortis	Israel	662 Tumbleweed	Chaparral	NM	88081
Sandoval	Brenda	249 C Amparo	Chaparral	NM	88081

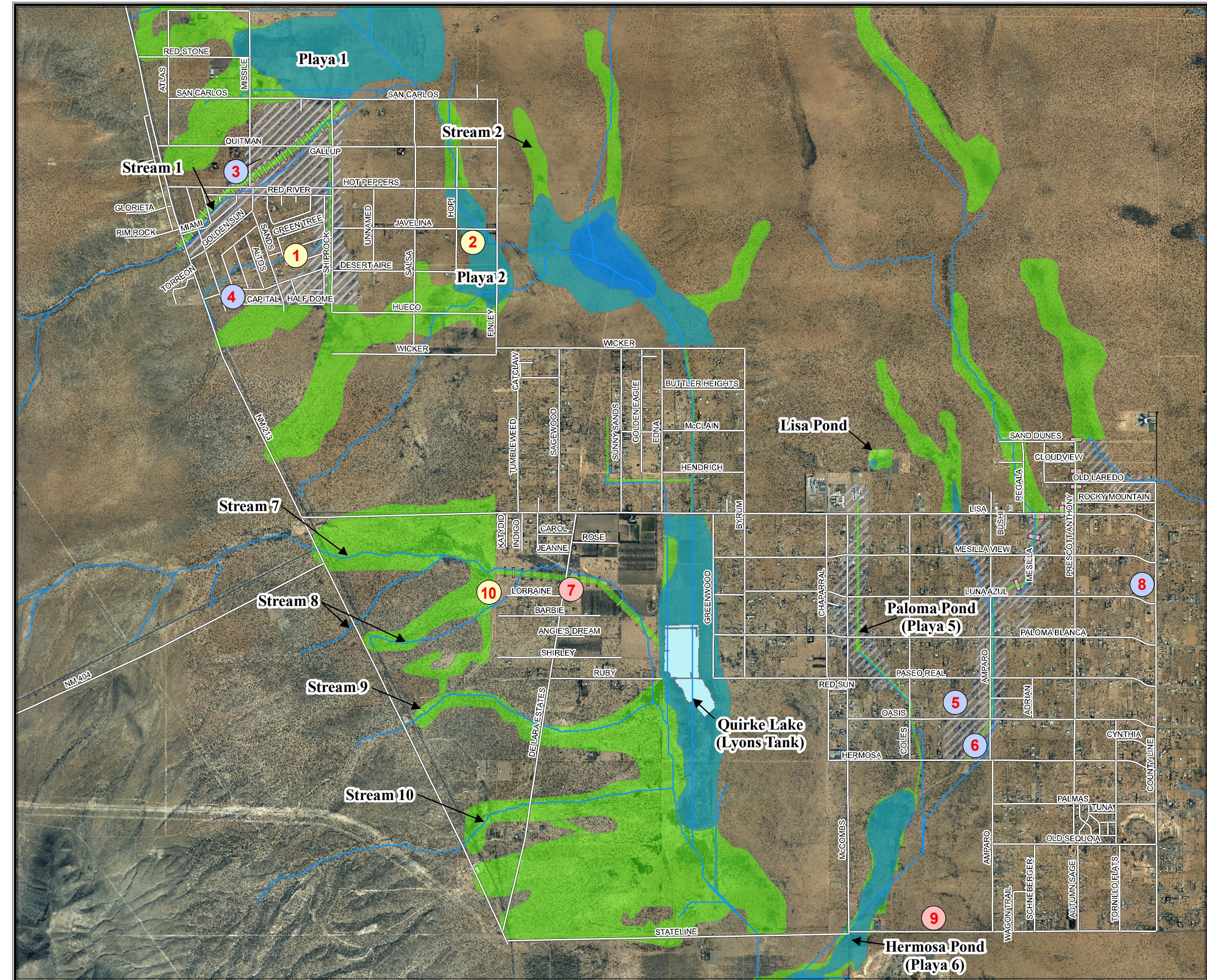
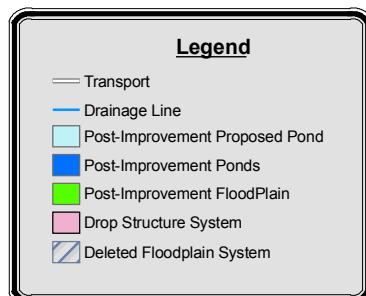
CHAPARRAL, NM

Community Meeting Notes

1. Home location is out of flood prone area. No issues with the current concept.
2. Home location is in the flood prone area, however homeowner manages to live with the flooding.
3. Current concept eliminated flooding at house location. Homeowner agrees with current concept.
4. Current model identifies house is out of the flood prone area.
5. Homeowner agrees with the current concept, alleviates flooding issues.
6. Homeowner agrees with the current concept.
7. Disagree with current concept.
8. Homeowner agrees with the current concept, alleviates flooding issues.
9. Resident concerned that runoff may impact the existing landfill and create hazardous conditions.
10. Resident is indifferent on the current concept.



0 1,500 3,000 6,000
Feet
1 inch equals 3,000 feet



Date: May 19, 2008 **DRAFT**

Project: Chaparral Master Drainage Plan

Subject: Summary of Public Involvement Meeting
May 12, 2008

Prepared for: URS under contract with
Doña Ana County Flood Commission

Prepared by: Brad Beacham, Parametrix (formerly Taschek
Environmental Consulting)

Location: Chaparral High School
800 County Line Road
Chaparral, New Mexico

Time: 6:30pm – 7:30pm

Project Team Members Present

Tish Segovia, DAC Flood Commission
Jorge Granados, DAC Public Works Director
Karen Burt, URS
Nicole Friedt, URS
Brad Beacham, Parametrix

Meeting Attendees

In addition to project team members, approximately 14 members of the public attended the meeting. Attached is a spreadsheet identifying all meeting attendees.

Summary of Meeting

The meeting began with an introduction on the history and purpose of the Chaparral Master Drainage Plan by Tish Segovia. Tish closed her portion of the presentation with a discussion of potential funding sources for the project. Karen Burt followed with a summary of the preliminary technical findings for the drainage characteristics of the area, and a discussion of the Drainage Master Plan Model, inclusive of the conceptual improvement alternatives. Brad Beacham followed with a summary of the public involvement program and a request for public input. Jorge Granados concluded the presentation with a brief overview of upcoming county road work. Louis Luna served as the translator for the meeting.

During the course of the presentation, five questions were asked. These questions are summarized below:

- 1) *Will the drainage features be constructed of concrete?* Tish Segovia answered, due to budget constraints this is not likely; however, design will deal with these issues on a case by case basis.
- 2) *Will Otero County be involved in the process, or do they intend to create a similar plan?* Tish Segovia answered, the present project is limited to Dona Ana County, and we are not aware of any plans that Otero County might have.
- 3) *Will the culverts removed from private drives during the sewer installation be replaced post-construction?* Tish Segovia answered, the sewer line installation is not a part of the Chaparral DMP; however, the contractor is generally responsible for returning effected features within the project area back to previous standards.
- 4) *Will a tax be imposed as a result of the proposed improvements (as compared to the recently established stormwater district in El Paso that is beginning implementation of revenue collection)?* Tish Segovia answered, not at this time.
- 5) *Who will maintain the constructed drainage features (specifically the accumulation of trash within them)?* Tish Segovia answered, that is an issue that will have to be worked out in the future, most likely requiring both County and local involvement.

Discussion Period

Following the presentation, an opportunity for questions and comments was offered to the attendees. This interactive session was conducted by breaking the project area into three stations: North, Central and South. Each station utilized conceptual mapping to illustrate the improvement alternatives. Attendees were given the opportunity to address specific concerns during the session, as well as provide general feedback for the alternatives using a color-coded sticker system. Feedback and comments received during the discussion session are summarized in the attached Community Meeting Notes graphic.

Comments received by Brad Beacham:

- One resident offered that he did not like the approach taken to advertising for the public meetings.
- One resident voiced his concern for the flood potential at Lisa Drive and Indigo Lane. It appears that the Road Department has filled in the road side swales along Lisa Drive. This individual did not attend the previous public meetings for the flood study; however, he would like to see something done with the De Lara berm to stop them from over topping.

Written Comments

As of May 19, 2008, no additional written comments have been received.

Attachments

Meeting Advertising

Meeting Attendees

Community Meeting Notes

DOÑA ANA COUNTY FLOOD COMMISSION
invites you to attend a
Public Meeting
on the proposed improvements included in the
Chaparral Drainage Master Plan

DATE: Monday,
May 12, 2008

TIME: 6:30 – 7:30 pm

PLACE: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



Doña Ana County Flood Commission is preparing a drainage master plan for the community of Chaparral, New Mexico. This public meeting is the third in a series of three public meetings that will be held on the master plan. The purpose of the meeting will be to present the results of the study to the public. Additionally, an update will be provided on upcoming county road work. It is a great opportunity for you to receive updates on the project, gather information, ask questions, and provide input. Everyone is encouraged to attend!

General questions about the project should be directed to:

- Leticia Segovia, DAC- (505) 525-5554 / leticias@donaanacounty.org

**LA COMISION DE INUNDACION DEL CONDADO
DE DOÑA ANA**

Les invita a asistir a una
Junta Pública

Sobre las mejorías propuestas incluidas en el

**Plan Maestro del Dren para
Chaparral**

FECHA: lunes,
12 de mayo, 2008

HORA: 6:30 – 7:30 pm

LUGAR: Chaparral High School
800 County Line Drive
Chaparral, NM 88081



La Comisión de Inundación del Condado de Doña Ana esta preparando un plan maestro para el dren en la comunidad de Chaparral, Nuevo México. Esta junta pública es la tercera en una serie de tres juntas públicas que tendrán lugar sobre el plan maestro. El propósito de la junta será para presentar los resultados del estudio al público. Adicionalmente, se dará un informe sobre el trabajo que viene en los caminos del condado. Es una buena oportunidad para que reciba informes sobre el proyecto, juntar información, hacer preguntas, y dar sus opiniones. ¡Animamos a que todos asistan!

Preguntas generales sobre el proyecto deben ser dirigidas a:
• Leticia Segovia, DAC- (505) 525-5554 / leticias@donaanacounty.org



Chaparral Drainage Master Plan

Public Meeting No. 3

May 12, 2008

Agenda

1. Introductions, Tish Segovia
 - a. Officials
 - b. Presenters
 - c. Project History
 - d. Project Funding
 - e. Summary of Public Meetings No. 1 and No. 2
 2. Project Overview, Karen Burt
 - a. Existing Conditions
 - b. Proposed Improvements
 3. Comments, Brad Beacham
 - a. From Participants, Group and Individual
 - b. Comment Form, Now or Later
-

1. Introducciones, Tish Segovia
 - c. Oficiales
 - d. Presentadores
 - e. Historia del Proyecto
 - f. Fondos para el Proyecto
 - g. Sumario de las Juntas Publicas No. 1 y No. 2
2. Repaso del Proyecto, Karen Burt
 - h. Condiciones Existentes
 - i. Mejorías Propuestas
3. Comentarios, Brad Beacham
 - j. De Participantes, Grupo e Individuales
 - k. Forma de Comentarios, Hoy o Despues

Chaparral Master Drainage Plan**Public Meeting #3****May 12, 2008****Attendees**

LastName	FirstName	Address	City	State	Zip
Aldaz	Rey	612 Paloma Blanca	Chaparral	NM	88081
Quintero	Robert H.	517 Oasis Dr.	Chaparral	NM	88081
Mazzocchi	Tony & Lilly	500 Amparo Rd.	Chaparral	NM	88081
Greenwood	David	317 Paloma Blanca	Chaparral	NM	88081
Greenwood	Jerry	317 Paloma Blanca	Chaparral	NM	88081
Colquitt	Rachelle	301 Paseo Real	Chaparral	NM	88081
Gable	Robert	500 Mesilla View	Chaparral	NM	88081
Quezada	Ramon	400 Chaparral Dr.	Chaparral	NM	88081
Green	Linda	4871 Salem Dr.	EI Paso	TX	79924
Wingard	Charles	353 Mesilla View Dr. 703 Golden Eagle	Chaparral	NM	88081
Blea	Frank & Carrie	Trail	Chaparral	NM	88081
Liper	Simon	667 Segewood	Chaparral	NM	88081

AMIX
Pest Control
Residential and
Commercial Service



Jerry Greenwood
Owner

Free Estimates

317 Paloma Blanca
Chaparral NM 88081

(915) 433-8837

Sign-In Sheet / Hoja de Registro
May 12, 2008 / 12 de mayo de 2008
Chaparral Master Drainage Plan / Doña Ana County Flood Commission



PLEASE PRINT CLEARLY / Por Favor Esciba Claramente

NAME / NOMBRE	ADDRESS / DIRECCION			Phone / Telefono	EMAIL / Correo Electronico
	Street / Calle	City, State / Ciudad, Estado	Zip / Zona Postal		
1. Robert H. Quintana	517 Oasis Dr.	Chaparral	88081	575-824-9442	
2. Jorge Granados	DAC				
3. Leticia Segovia	845 N. Motel Blvd	Las Cruces NM 88007		525-555-9449	leticias@doñaanacounty.org
4. Tony & Lili Massuccelli	500 Ameraro Rd	Chaparral NM	88081	824-4248	
5. Ramon Quezada	400 Chapparal Dr.	Chaparral NM	88081	824-4391	rayg@qbx.com
6. Michelle Colquitt	301 Paseo Real	Chaparral NM	88081	824-4144	
7. Hey Oldroyd	612 - Paloma Blanca El Paso, Tx.	Chapparal	88081	915-472-2735	
8. Gina Green	4871 Salina Dr.	El Paso	79924	915-824-4951	cchc3391 824-3391
9. Charles Wintard	353 Mercedes Vie Dr.	Chaparral	88081	824-403-2446	
10. Hank Carrie Blee	703 Golden Eagle Trail	Chaparral	88081	915-826-6708	frankblee@email.com
11. Morgan Lipez	667 Sagewood	Chapparal	88081	915-222-9159	
12. Michael Bentzoff Jr.	3119 Palomino Blanca	Chaparral	88081	NA	
13. Brad Becker	1155 S. Teller Blvd.	Las Cruces NM	88004	575-522-7400	beckerm@jazz.net.xs4all.nl
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Sign-In Sheet / Hoja de Registro
May 12, 2008 / 12 de mayo de 2008
Chaparral Master Drainage Plan / Doña Ana County Flood Commission



PLEASE PRINT CLEARLY / Por Favor Esciba Claramente

NAME / NOMBRE	ADDRESS / DIRECCION			Phone / Telefono	EMAIL / Correo Electronico
	Street / Calle	City, State / Ciudad, Estado	Zip / Zona Postal		
1. Robert Appleby	San Miguel Ave	Chaparral, NM	88081	824-8012	robertappleby@aol.com
2.					
3.					
4.					
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20.					



Chaparral Drainage Master Plan Dona Ana County Flood Commission

COMMENT SHEET / HOJA PARA COMENTARIOS

Public Meeting / Reunión de Participación Ciudadana
Monday, May 12, 2008 / mayo 12, 2008

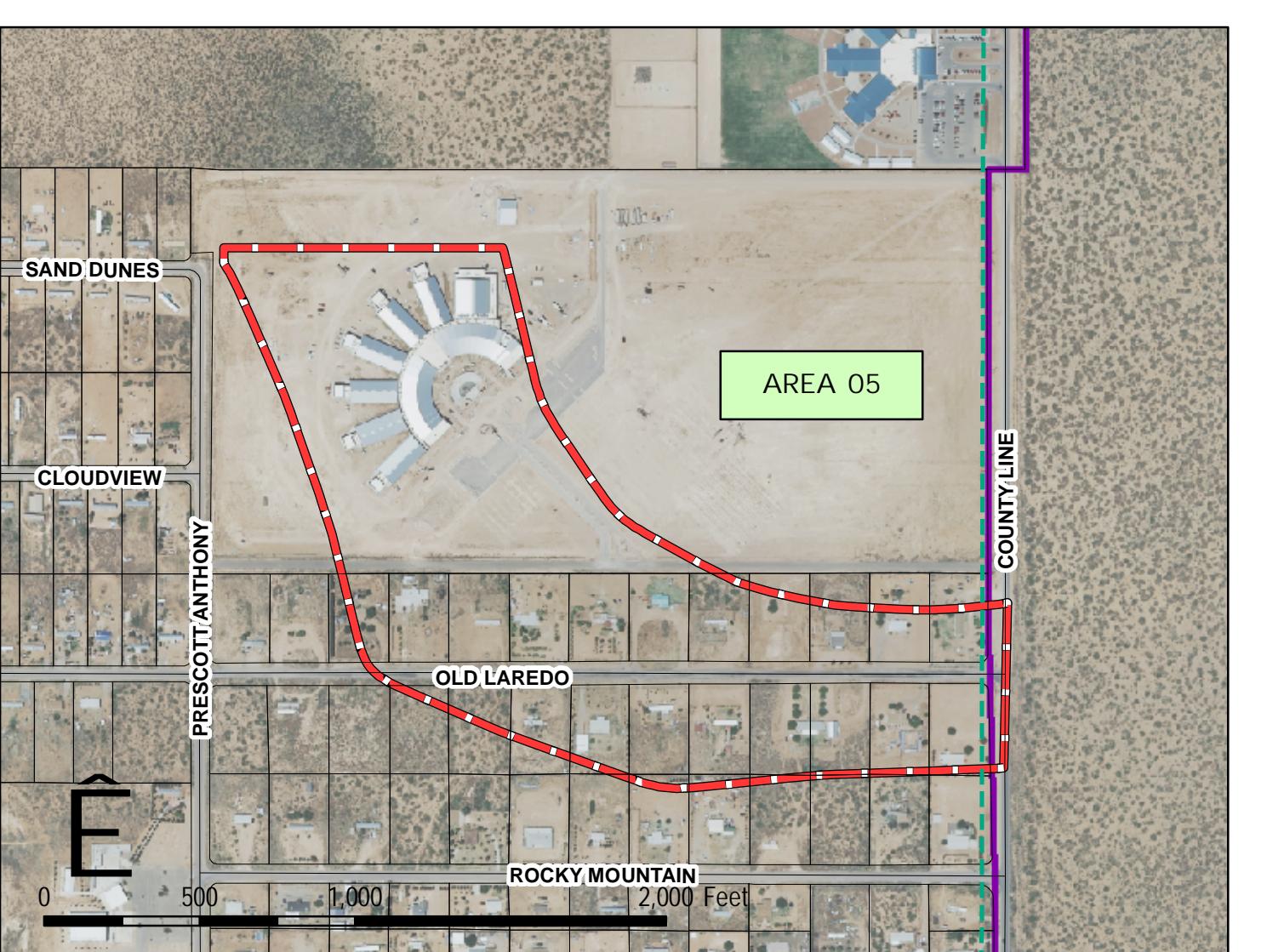
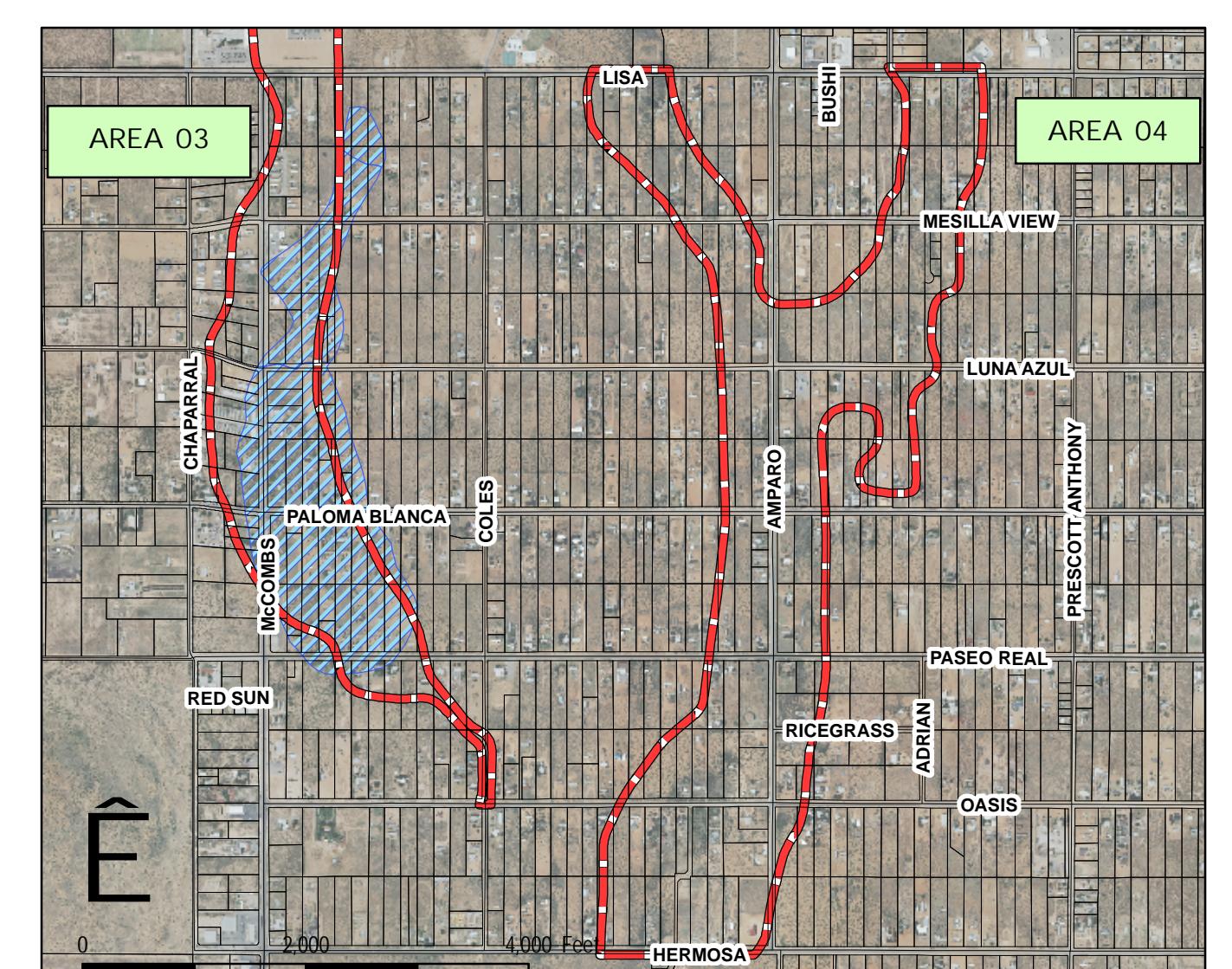
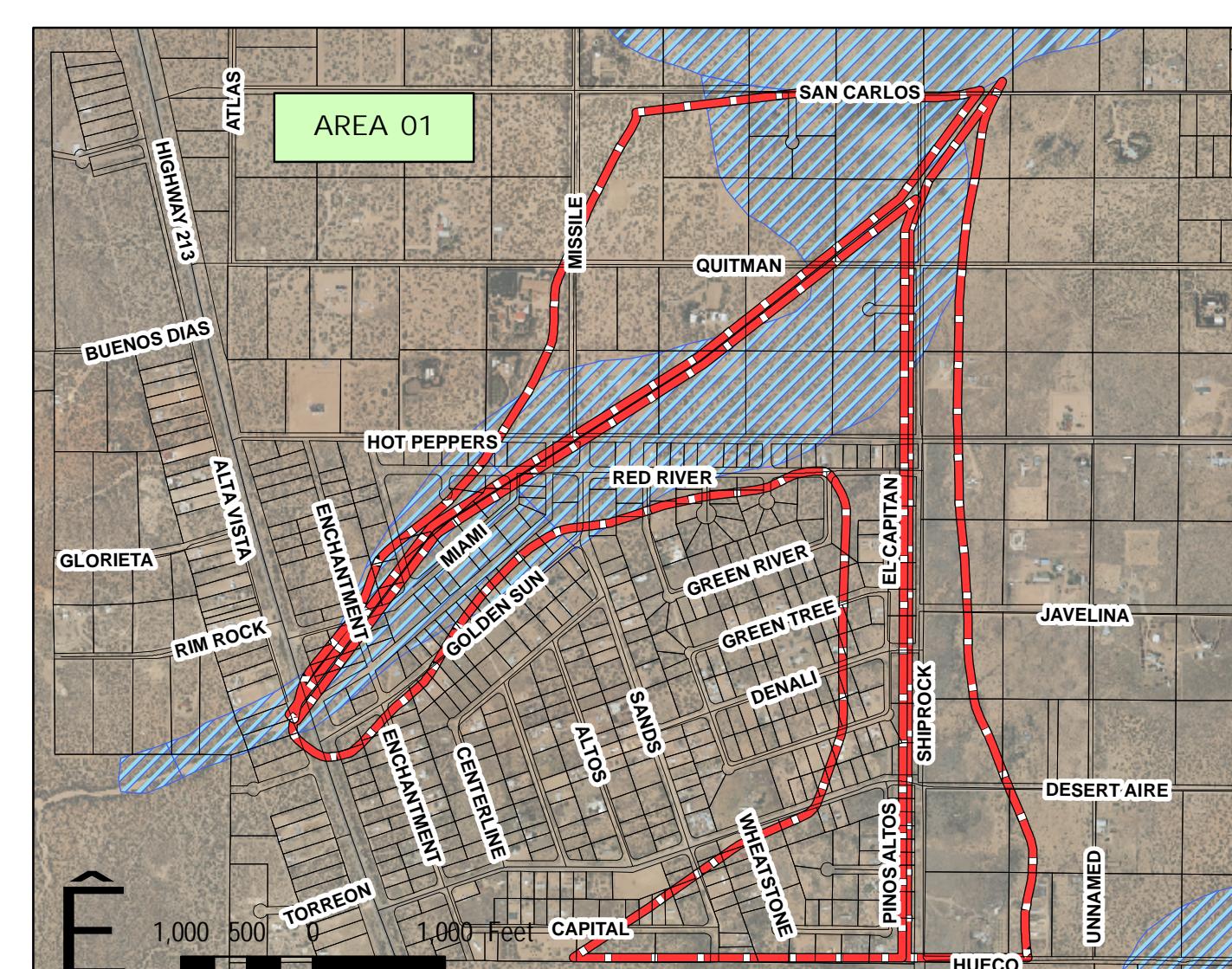
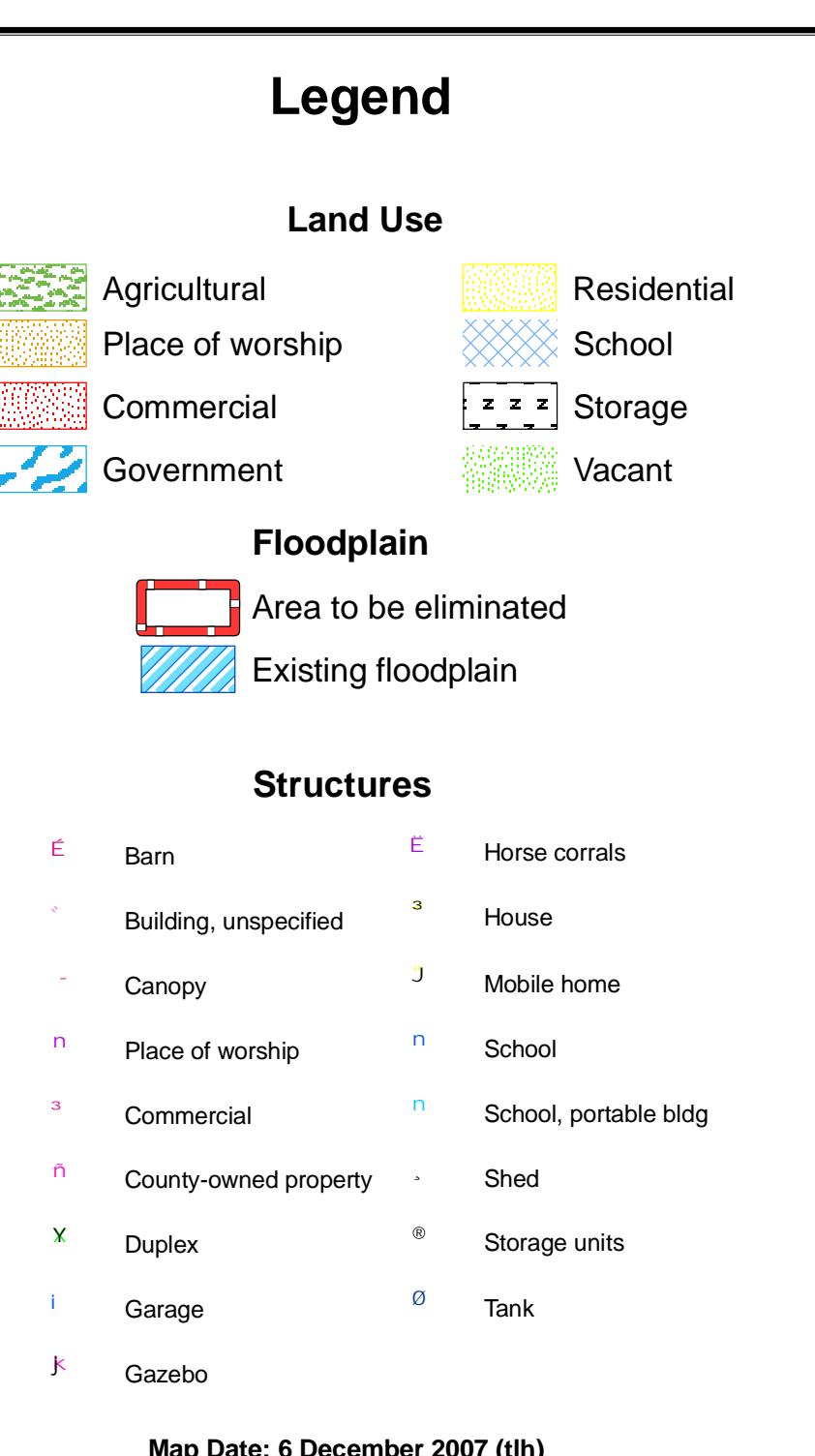
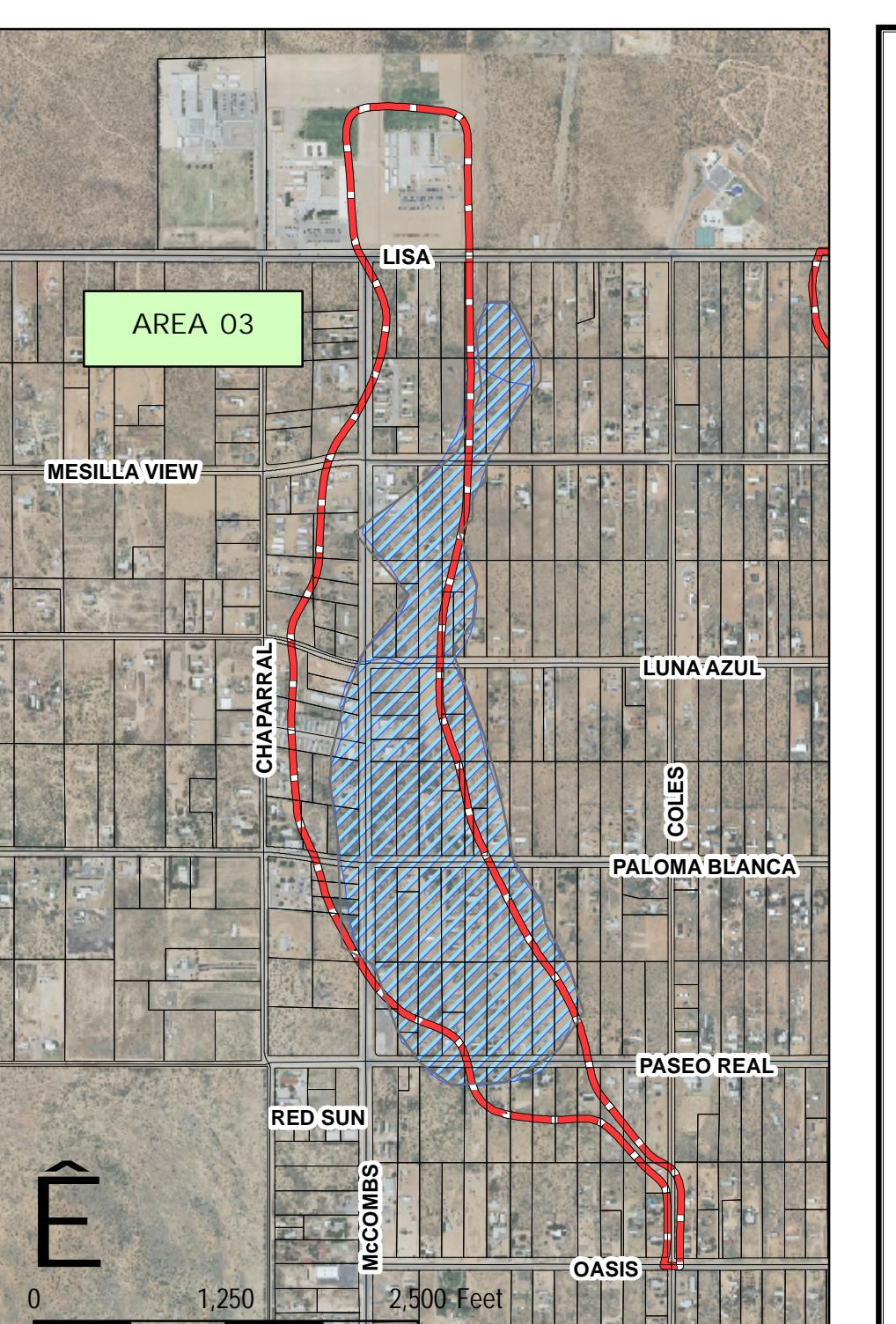
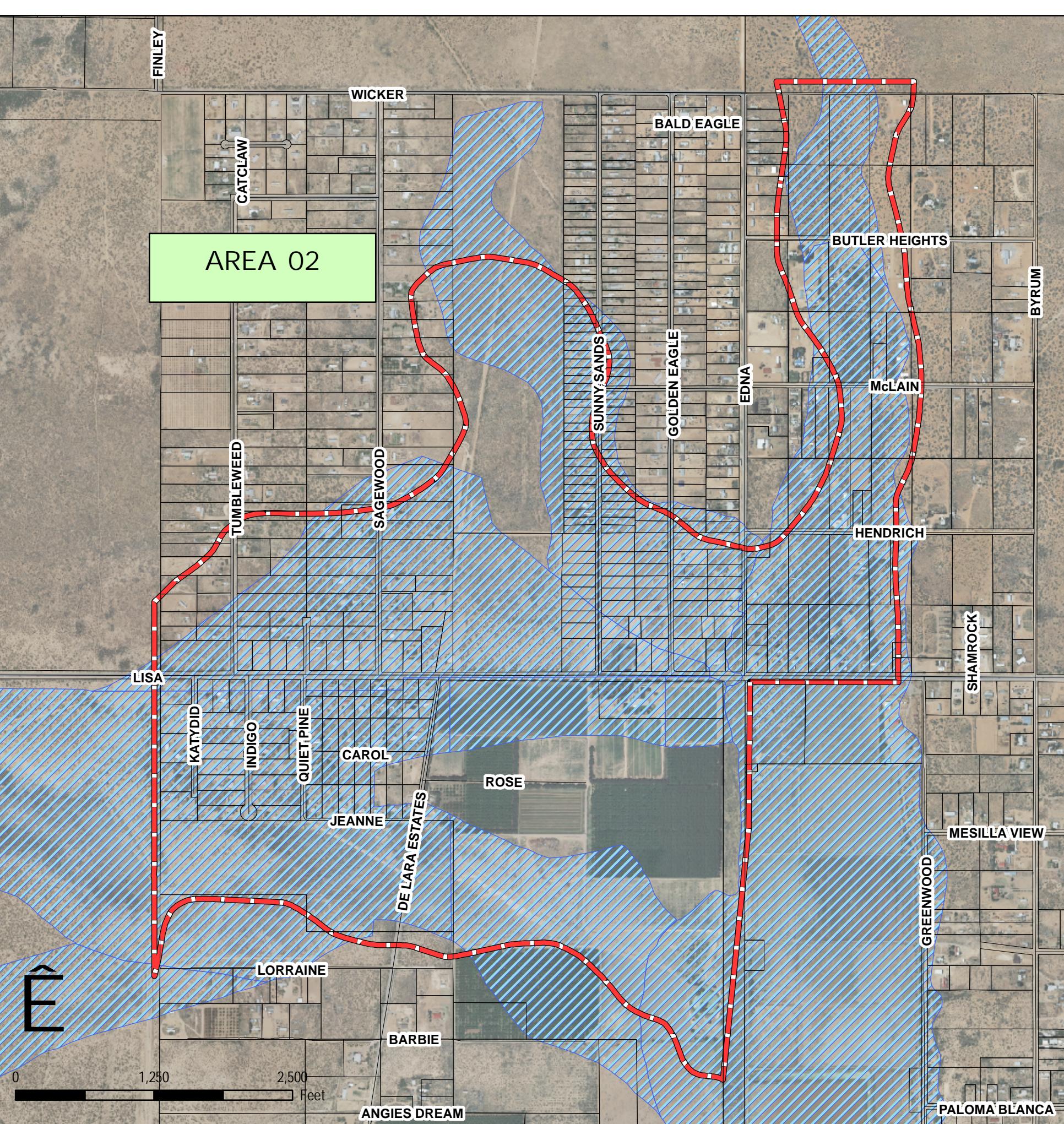
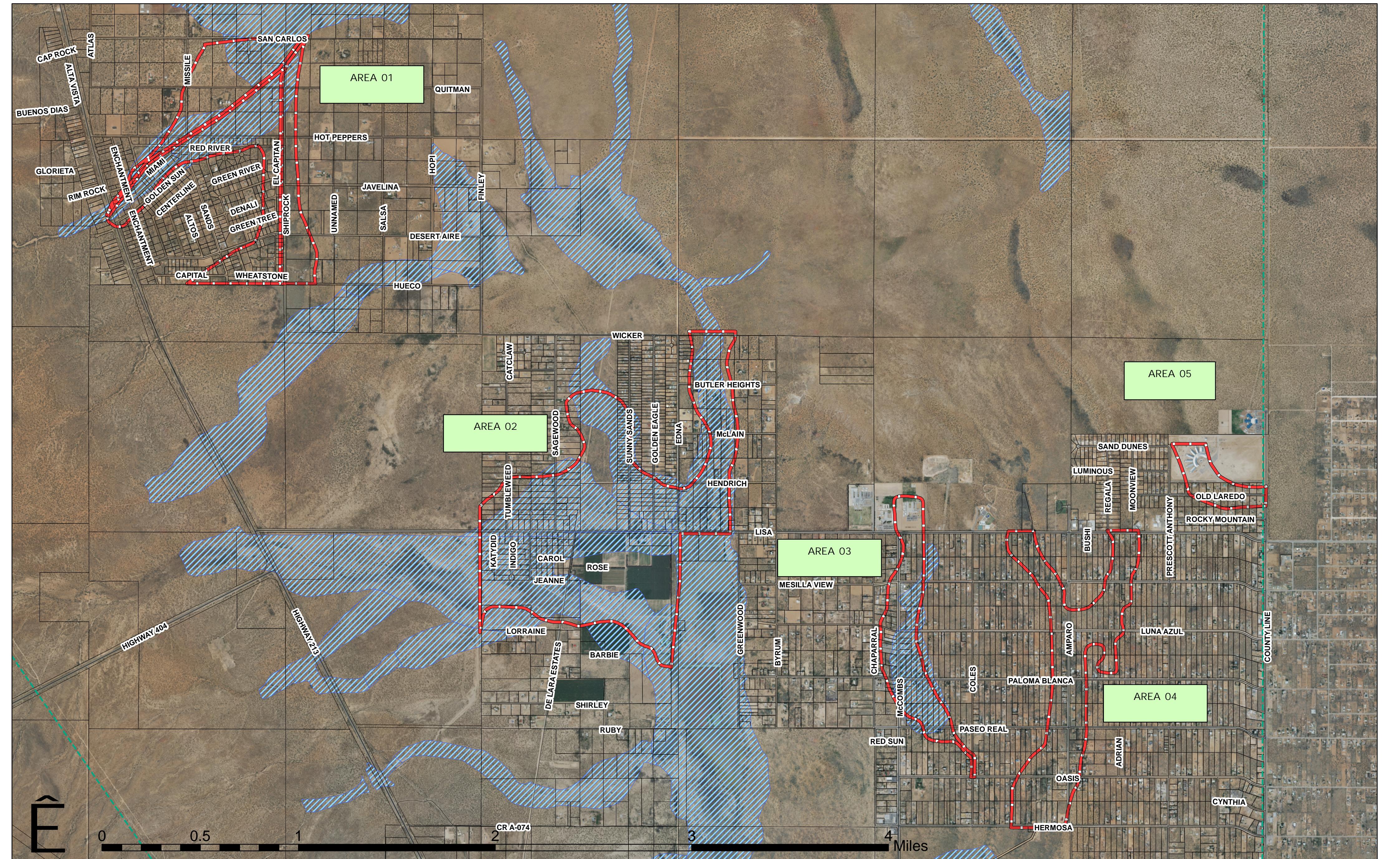
I don't like the way these
meetings are held without any telling
anyone about it, and what this
is for

Mail To / Envíe por correo a:		Please Print Clearly Por favor escriba claramente
Parametrix 1155 S. Telshor Blvd, Ste. 204 Las Cruces, NM 88011 (575) 522-7400 / (575) 649-0904 bbeacham@parametrix.com	Name/ Nombre:	<i>Mark H. Hammond Jr.</i>
	Address/ Dirección:	<i>317 Valencia Blanca Dr. Chaparral NM</i>
	Phone/ Teléfono:	
	E-mail/ Dirección Electrónica:	

Our address also appears on the opposite side of this form, which if folded and taped may be mailed to us directly./Nuestra dirección aparece en el lado opuesto de ésta forma, de tal manera que si la dobla y pega con cinta adhesiva, puede enviárnosla directamente..

Chaparral Floodplain Project

Overview Map

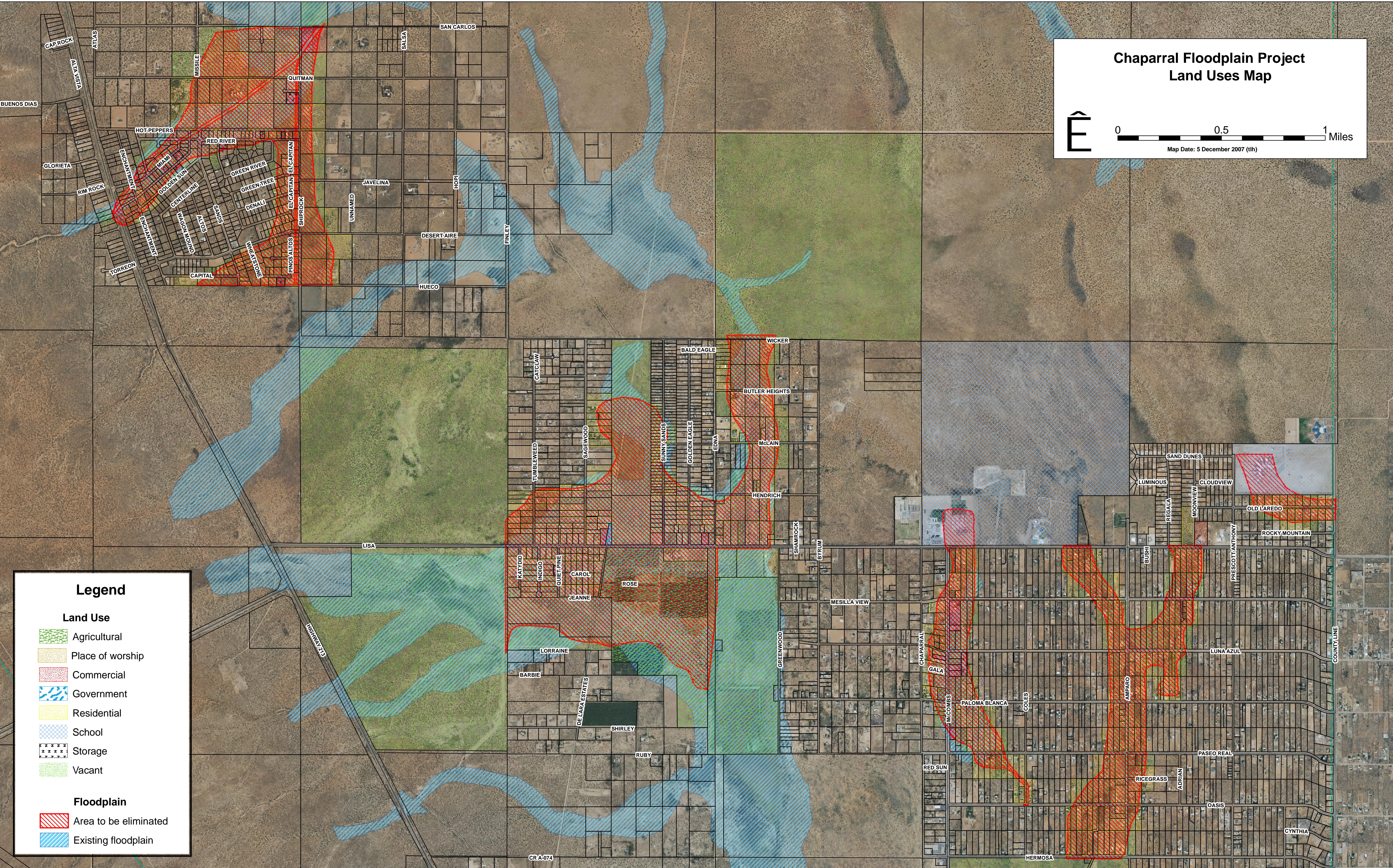


**Chaparral Floodplain Project
Land Uses Map**

E

0 0.5 1 Miles

Map Date: 5 December 2007 (tlh)



Legend

- Land Use**
- Agricultural
 - Place of worship
 - Commercial
 - Government
 - Residential
 - School
 - Storage
 - Vacant

Floodplain

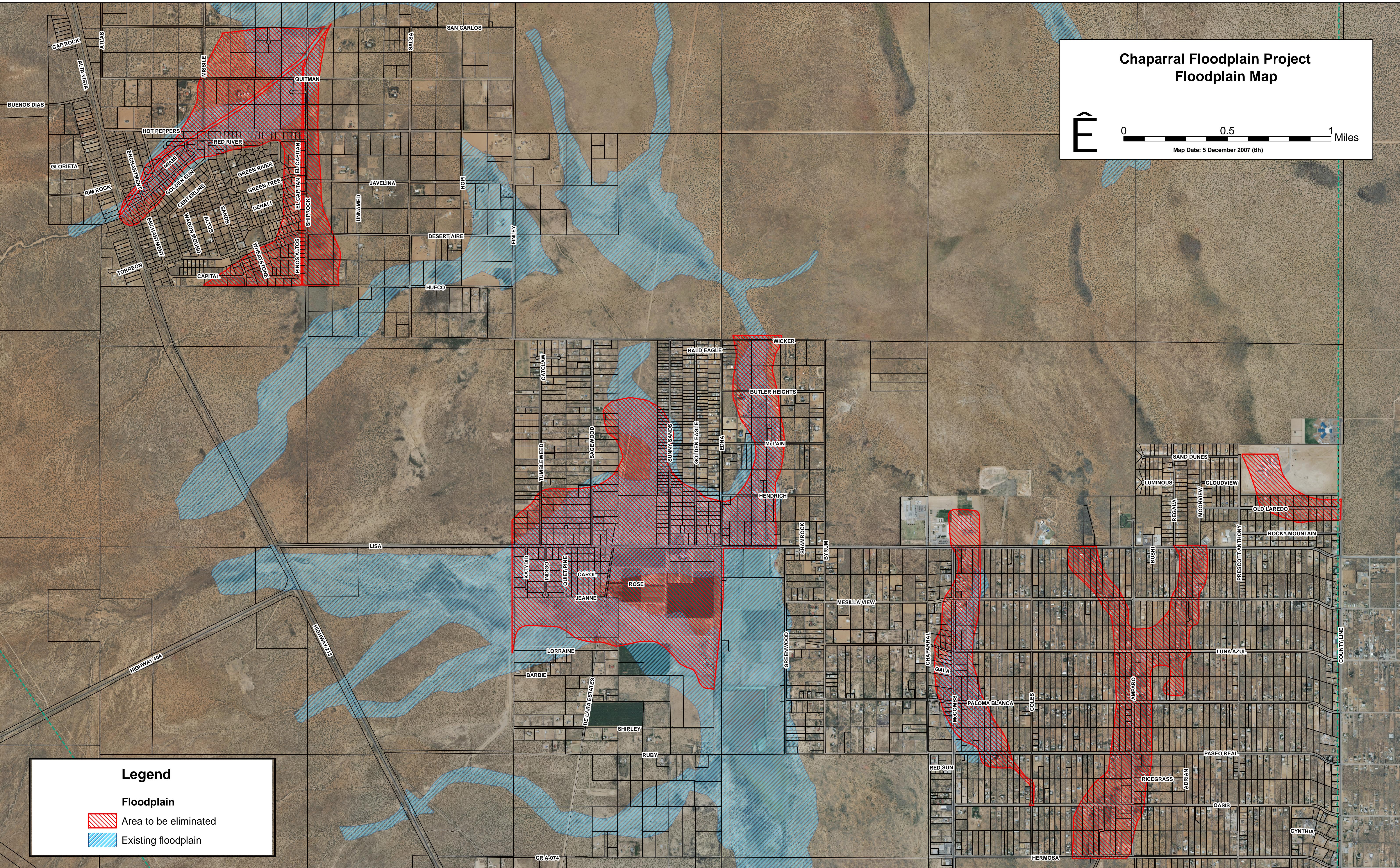
- Area to be eliminated
- Existing floodplain

**Chaparral Floodplain Project
Floodplain Map**

E

0 0.5 1 Miles

Map Date: 5 December 2007 (tlh)



Chaparral Floodplain Project Structures

E

Map Date: 5 December 2007 (tlh)

Miles

Map Date: 5 December 2007 (tlh)

Digitized by srujanika@gmail.com

Legend

Structures

BARN	E	HORSE CORRALS
BLDG	3	HOUSE
CANOPY	J	MOBILE HOME
CHURCH	n	SCHOOL
COMMERCIAL	n	SCHOOL PORTABLE
COUNTY-OWNED	s	SHED
DUPLEX	®	STORAGE UNITS

Floodplain

-  Area to be eliminated
 -  Existing floodplain

Chaparral - Area 01

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 226 total

Residential parcels – 92

- 199 structures
- 179 acres
- 44 acres in current floodplain
- 7 acres in floodplain after URS proposal

Vacant parcels – 122

- 0 structures
- 242 acres
- 61 acres in current floodplain
- 12 acres in floodplain after URS proposal

Commercial parcels – 2

- 2 structures
- 9 acres
- 5 acres in current floodplain
- 1 acre in floodplain after URS proposal

Places of worship – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Ag-related parcels – 1

- 1 structure
- 9 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Government-owned parcels – 0

- 0 structures
- 0 acre
- 0 acre in current floodplain
- 0 acre in floodplain after URS proposal

Storage parcels – 10

- 15 structures
- 9 acres
- 4 acres in current floodplain
- 0.5 acre in floodplain after URS proposal

School parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Total acreage in Deleted Floodplain boundary –

361 acres

Total acreage in current floodplain –

187 acres

Total acreage in parcels –

468 acres

(note: this includes parcels that cross the Deleted Floodplain boundary)

Structures

Total structures on the parcels - 224

Residence - 108	Places of worship - 0
Commercial - 1	Bldg on County-owned property - 0
Ag-related (barn, corrals, etc) - 16	School (school, portables, etc) - 0
Outbuildings (shed, etc) - 42	Other/undetermined buildings - 58

Structures within existing floodplain - 82

Residence - 26	Places of worship – 0
Commercial - 0	Schools – 0
Ag-related (horse corrals, etc) - 9	Bldg on County-owned property – 0
Outbuildings – 25	Other/undetermined buildings - 22

Structures within Deleted Floodplain boundary – 167

Residence - 79	Places of worship – 0
Commercial - 0	Schools – 0
Ag-related (horse corrals, etc) - 16	Bldg on County-owned property – 0
Outbuildings – 31	Other/undetermined buildings - 42

Potential cost

Total land cost of study area parcels	\$ 2,213,084
Total building cost of study area parcels	\$ 2,468,249
Total land cost within current floodplain boundaries	\$ 1,107,482
Total building cost within current floodplain boundaries	\$ 1,019,902
Total land cost eliminated from current floodplain	\$ 1,175,602
Total building cost eliminated from current floodplain	\$ 1,448,347

Chaparral - Area 02

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 296 total

Residential parcels – 206

- 280 structures
- 310 acres
- 228 acres in current floodplain
- 26 acres in floodplain after URS proposal

Vacant parcels – 78

- 0 structures
- 2073 acres
- 532 acres in current floodplain
- 377 acres in floodplain after URS proposal

Commercial parcels – 2

- 2 structures
- 3 acres
- 3 acres in current floodplain
- 0 acre in floodplain after URS proposal

Places of worship – 1

- 3 structures
- 2 acres
- 2 acres in current floodplain
- 0 acres in floodplain after URS proposal

Ag-related parcels – 7

- 18 structures
- 369 acres
- 319 acres in current floodplain
- 213 acres in floodplain after URS proposal

Government-owned parcels – 1

- 1 structures
- 1 acre
- 1 acre in current floodplain
- 0 acres in floodplain after URS proposal

Storage parcels – 1

- 4 structures
- 14 acres
- 0.6 acres in current floodplain
- 0 acres in floodplain after URS proposal

School parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Total acreage in Deleted Floodplain boundary –

688 acres

Total acreage in current floodplain –

507 acres

Total acreage in parcels –

2759 acres

(note: this includes parcels that cross the Deleted Floodplain boundary)

Structures

Total structures on the parcels – 479

Residence – 252	Places of worship – 1
Commercial – 4	Bldg on County-owned property – 1
Ag-related (barn, corrals, etc) – 79	School (school, portables, etc) – 0
Outbuildings (shed, etc) – 63	Other/undetermined buildings – 74

Structures within existing floodplain – 371

Residence – 207	Places of worship – 1
Commercial – 4	Schools – 0
Ag-related (horse corrals, etc) – 51	Bldg on County-owned property – 1
Outbuildings – 54	Other/undetermined buildings – 53

Structures within Deleted Floodplain boundary – 380

Residence – 204	Places of worship – 1
Commercial – 4	Schools – 0
Ag-related (horse corrals, etc) – 64	Bldg on County-owned property – 1
Outbuildings – 54	Other/undetermined buildings – 52

Potential cost

Total land cost of study area parcels	\$ 6,198,099
Total building cost of study area parcels	\$ 4,501,715
Total land cost within current floodplain boundaries	\$ 5,741,218
Total building cost within current floodplain boundaries	\$ 4,259,662
Total land cost eliminated from current floodplain	\$ 456,881
Total building cost eliminated from current floodplain	\$ 242,053

Chaparral - Area 03

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 92 total

Residential parcels – 59

- 87 structures
- 102 acres
- 40 acres in current floodplain
- 8 acres in floodplain after URS proposal

Vacant parcels – 23

- 0 structures
- 34 acres
- 18 acres in current floodplain
- 3 acres in floodplain after URS proposal

Commercial parcels – 6

- 7 structures
- 9 acres
- 5 acres in current floodplain
- 0.05 acre in floodplain after URS proposal

Places of worship – 1

- 3 structures
- 2 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Ag-related parcels – 1

- 3 structures
- 2 acres
- 2 acres in current floodplain
- 0.2 acres in floodplain after URS proposal

Government-owned parcels – 0

- 0 structures
- 0 acre
- 0 acre in current floodplain
- 0 acre in floodplain after URS proposal

Storage parcels – 1

- 16 structures
- 2 acres
- 2 acres in current floodplain
- 0 acre in floodplain after URS proposal

School parcels – 1

- 10 structures
- 600 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Total acreage in Deleted Floodplain boundary –

138 acres

Total acreage in current floodplain –

68 acres

Total acreage in parcels –

750 acres

(note: this includes parcels that cross the Deleted Floodplain boundary)

Structures

Total structures on the parcels - 1253

Residence - 627	Places of worship - 2
Commercial - 17	Bldg on County-owned property - 1
Ag-related (barn, corrals, etc) - 122	School (school, portables, etc) - 30
Outbuildings (shed, etc) - 198	Other/undetermined buildings - 256

Structures within existing floodplain - 531

Residence - 153	Places of worship – 1
Commercial - 9	Schools – 0
Ag-related (horse corrals, etc) - 66	Bldg on County-owned property – 1
Outbuildings – 105	Other/undetermined buildings - 96

Structures within Deleted Floodplain boundary – 926

Residence - 466	Places of worship – 1
Commercial - 12	Schools – 11
Ag-related (horse corrals, etc) - 94	Bldg on County-owned property – 1
Outbuildings – 155	Other/undetermined buildings - 186

Potential cost

Total land cost of study area parcels	\$ 1,583,851
Total building cost of study area parcels	\$ 2,468,268
Total land cost within current floodplain boundaries	\$ 947,982
Total building cost within current floodplain boundaries	\$ 1,715,008
Total land cost eliminated from current floodplain	\$ 635,869
Total building cost eliminated from current floodplain	\$ 753,260

Chaparral - Area 04

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 162 total

Residential parcels – 104

- 264 structures
- 204 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Vacant parcels – 53

- 0 structures
- 695 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Commercial parcels – 1

- 2 structures
- 5 acres
- 0 acres in current floodplain
- 0 in floodplain after URS proposal

Places of worship – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Ag-related parcels – 3

- 2 structures
- 6 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Government-owned parcels – 0

- 0 structures
- 0 acre
- 0 acre in current floodplain
- 0 acre in floodplain after URS proposal

Storage parcels – 1

- 1 structures
- 2 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

School parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Total acreage in Deleted Floodplain boundary –

252 acres

Total acreage in current floodplain –

0 acres

Total acreage in parcels –

912 acres

(note: this includes parcels that cross the Deleted Floodplain boundary)

Structures

Total structures on the parcels – 252

Residence – 139	Places of worship – 0
Commercial – 2	Bldg on County-owned property – 0
Ag-related (barn, corrals, etc) – 20	School (school, portables, etc) – 0
Outbuildings (shed, etc) – 29	Other/undetermined buildings – 62

Structures within existing floodplain – 0

Residence – 0	Places of worship – 0
Commercial – 0	Schools – 0
Ag-related (horse corrals, etc) – 0	Bldg on County-owned property – 0
Outbuildings – 0	Other/undetermined buildings – 0

Structures within Deleted Floodplain boundary – 187

Residence – 104	Places of worship – 0
Commercial – 1	Schools – 0
Ag-related (horse corrals, etc) – 15	Bldg on County-owned property – 0
Outbuildings – 19	Other/undetermined buildings – 47

Potential cost

Total land cost of study area parcels	\$ 2,808,903
Total building cost of study area parcels	\$ 4,772,961
Total land cost within current floodplain boundaries	\$ 0
Total building cost within current floodplain boundaries	\$ 0
Total land cost eliminated from current floodplain	\$ 0
Total building cost eliminated from current floodplain	\$ 0

Chaparral - Area 05

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 27 total

Residential parcels – 22

- 45 structures
- 29 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Vacant parcels – 4

- 0 structures
- 5 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Commercial parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acre in floodplain after URS proposal

Places of worship – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Ag-related parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Government-owned parcels – 0

- 0 structures
- 0 acre
- 0 acre in current floodplain
- 0 acre in floodplain after URS proposal

Storage parcels – 0

- 0 structures
- 0 acres
- 0 acres in current floodplain
- 0 acre in floodplain after URS proposal

School parcels – 1

- 27 structures
- 75 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

Total acreage in Deleted Floodplain boundary –

48 acres

Total acreage in current floodplain –

0 acres

Total acreage in parcels –

109 acres

(note: this includes parcels that cross the Deleted Floodplain boundary)

Structures

Total structures on the parcels – 47

Residence – 27	Places of worship – 0
Commercial – 0	Bldg on County-owned property – 0
Ag-related (barn, corrals, etc) – 0	School (school, portables, etc) – 1
Outbuildings (shed, etc) – 4	Other/undetermined buildings -- 15

Structures within existing floodplain – 0

Residence – 0	Places of worship – 0
Commercial – 0	Schools – 0
Ag-related (horse corrals, etc) – 0	Bldg on County-owned property – 0
Outbuildings – 0	Other/undetermined buildings – 0

Structures within Deleted Floodplain boundary – 35

Residence - 21	Places of worship – 0
Commercial - 0	Schools – 1
Ag-related (horse corrals, etc) - 0	Bldg on County-owned property – 0
Outbuildings – 2	Other/undetermined buildings -- 11

Potential cost

Total land cost of study area parcels	\$ 510,056
Total building cost of study area parcels	\$ 273175
Total land cost within current floodplain boundaries	\$ 0
Total building cost within current floodplain boundaries	\$ 0
Total land cost eliminated from current floodplain	\$ 0
Total building cost eliminated from current floodplain	\$ 0

Chaparral Project Area

Parcel Summary

Parcels in (or intersecting) the URS Deleted Floodplain boundary, 804 total

483 Residential parcels

- 979 structures
- 824 acres
- 328 acres in current floodplain
- 32 acres in floodplain after URS proposal

281 Vacant parcels

- 0 structures
- 3069 acres
- 833 acres in current floodplain
- 599 acres in floodplain after URS proposal

10 Commercial parcels

- 18 structures
- 25 acres
- 12.9 acres in current floodplain
- 1 acre in floodplain after URS proposal

2 Places of worship

- 3 structures
- 4 acres
- 2 acres in current floodplain
- 0 acres in floodplain after URS proposal

12 Ag-related parcels

- 22 structures
- 386 acres
- 320 acres in current floodplain
- 213 acres in floodplain after URS proposal

1 Government-owned parcels

- 1 structures
- 1 acre
- 1 acre in current floodplain
- 1 acre in floodplain after URS proposal

13 Storage parcels

- 21 structures
- 14 acres
- 8 acres in current floodplain
- 1 acre in floodplain after URS proposal

2 School parcels

- 27 structures
- 675 acres
- 0 acres in current floodplain
- 0 acres in floodplain after URS proposal

413 parcels completely within the Deleted Floodplain boundaries

391 parcels intersecting the Deleted Floodplain boundaries

Structures

Total structures on the parcels - 1253

Residence - 627	Places of worship - 2
Commercial - 17	Bldg on County-owned property - 1
Ag-related (barn, corrals, etc) - 122	School (school, portables, etc) - 30
Outbuildings (shed, etc) - 198	Other/undetermined buildings - 256

Structures within existing floodplain - 531

Residence - 153	Places of worship – 1
Commercial - 9	Schools – 0
Ag-related (horse corrals, etc) - 66	Bldg on County-owned property – 1
Outbuildings – 105	Other/undetermined buildings - 96

Structures within Deleted Floodplain boundary – 926 (eliminated from floodplain)

Residence - 466	Places of worship – 1
Commercial - 12	Schools – 11
Ag-related (horse corrals, etc) - 94	Bldg on County-owned property – 1
Outbuildings – 155	Other/undetermined buildings - 186

Potential cost

Total land cost of study area parcels	\$ 13,383,993
Total building cost of study area parcels	\$ 14,484,368
Total land cost within current floodplain boundaries	\$ 7,871,478
Total building cost within current floodplain boundaries	\$ 7,017,632
Total land cost eliminated from current floodplain	\$ 5,512,515
Total building cost eliminated from current floodplain	\$ 7,466,736