Pre-Discovery Report

Valencia County, New Mexico

Valencia County, NM
March 4, 2019

FEMA

Project Area Community List

Community Name*	CID
Valencia County Communities	
Valencia Unincorporated Areas	350086
Belen, City of	350088
Bosque Farms, Village of	350142
Isleta, Pueblo of	350057
Laguna, Pueblo of	350003
Los Lunas, Village of	350144
Peralta, Town of	350040
Rio Communites, City of	355333E

Commented [cmc1]: List counties/parishes alphabetically

*Communities without CIDs are not included.

Table of Contents

List of Tables

List of Figures

The basis and format of this document is derived from FEMA Guidance and Specification, Procedure Memorandums, Operational Guidance, Regional Standard Operating Procedures, and current draft revisions and proposed guidance to include, but not limited to;

Guidance and Specifications: Appendix I - Discovery

Guidance and Specifications: Appendix M – Data Capture Standards

PM 56: Guidelines for Implementation of Coordinated Needs Management Strategy (CNMS)

PM 59: Guidance for Implementation of Watershed-Based Studies

PM 60: Guidance for Flood Risk Assessment Data Development and Analysis

Operational Guidance No. 1-11: Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects

Operational Guidance No. 4-11: Risk MAP Meeting Guidance

FEMA Region 6 Discovery & Project Pre-Planning SOP

Any revisions or changes to this document will require FEMA Region 6 Authorization prior to implementation.

Acronyms and Abbreviations

BFE	base (1-percent-annual-chance) flood elevation
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
cfs	cubic feet per second
CID	Community Identification number
CLOMR	Conditional Letter of Map Revision
CNMS	Coordinated Needs Management Strategy
CRS	Community Rating System
DFIRM	Digital Flood Insurance Rate Map
EDAC	Earth Data Analysis Center
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FPA	Floodplain Administrator
GIS	geographic information system
HEC-1	Hydrologic Engineering Center – Hydrologic Model Program
HEC-2	Hydrologic Engineering Center – Hydraulic Model Program
HEC-HMS	Hydrologic Engineering Center – Hydrologic Modeling System
H&H	hydrologic and hydraulic
HMP	Hazard Mitigation Plan
HUC	Hydrologic Unit Code
HWM	high water mark
LiDAR	Light Detection and Ranging System
LOMA	Letter of Map Amendment
LOMC	Letter of Map Change
LOMR	Letter of Map Revision
MAT	Mitigation Assessment Team
MDP	Master Drainage Plan
MXD	Map Exchange Document
MRGCD	Middle Rio Grande Conservancy District
NFIP	National Flood Insurance Program

NHD	National Hydrologic Dataset
NMDHSEM	New Mexico Department of Homeland Security and Emergency Management
NM RGIS	New Mexico Resource Geographic Information System
NRCS	Natural Resources Conservation Service
NVUE	New Validated or Updated Engineering
RAMPP	Risk Assessment, Mapping and Planning Partners
Risk MAP	Risk Mapping, Assessment, and Planning
RL	Repetitive Loss
PMR	Physical Map Revision
RSC	Regional Service Center
SFHA	Special Flood Hazard Area
SHMO	State Hazard Mitigation Officer
SHP	ESRI Shape File
SRL	Severe Repetitive Loss
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USFWS	U.S. Fish & Wildlife Service

I. Discovery Overview

The Federal Emergency Management Agency (FEMA) is currently implementing the Risk Mapping, Assessment, and Planning (Risk MAP) Program across the Nation. The purpose of Risk MAP is continued improvement of flood hazard information for the National Flood Insurance Program (NFIP), the promotion of increased national awareness and understanding of flood risk and the support of Federal, State, and local mitigation actions to reduce risk.

The vision and intent of the Risk MAP program is to, through collaboration with the State of New Mexic, local and tribal entities, deliver quality data that increases public awareness and leads to mitigation actions that reduce risk to life and property. To achieve this vision, FEMA has transformed its traditional flood identification and mapping efforts into a more integrated process of more accurately identifying, assessing, communicating, planning and mitigating flood risks. Risk MAP attempts to address gaps in flood hazard data and form a solid foundation for risk assessment, floodplain management, and provide the State of New Mexic, local and tribal entities with information needed to mitigate flood related risks.

The FEMA Region 6 office, in partnership with the Earth Data Analysis Center, University of New Mexico began the Discovery process in Valencia County in December 2018 to gather local information and readily available data to determine project viability and the need for Risk MAP products to assist in the movement of communities towards resilience. The watershed location can be seen in Figure 1.

Through the Discovery process, FEMA can determine which areas of the HUC8 Discovery watersheds may/will be funded for further flood risk identification and assessment in a collaborative manner, taking into consideration the information collected from local communities during this process. Discovery initiates open lines of communication and relies on local involvement for productive discussions about flood risk. The process provides a forum for a watershed-wide effort to understand how the included watershed community's flood risks are related to flood risk throughout the watershed. In Risk MAP, projects are analyzed on a watershed basis, so Discovery Meetings target numerous stakeholders from throughout the watershed on local, regional, State, and Federal levels.

In March 2019 FEMA and EDAC, as the State CTP, will hold a Discovery Meeting in Valencia County. During Discovery, FEMA and EDAC will reach out to local communities to:

- Gather information about local or Tribal flood risk and flood hazards
- Reviewed current and historic mitigation plans to understand local and Tribal mitigation capabilities, hazard risk assessments, and current or future mitigation activities.
- Include multi-diciplinary staff from within their community to participate and assist in the development of a watershed vision.

The results of the Discovery process are presented in a Discovery Report, a watershed scale Discovery Map and the digital data that were gathered or developed during the process under under the fiscal year 2018 CTP Agreement, EMT-2017-CA-00010, Mapping Activity Statement (MAS) 12, between FEMA and EDAC.

This document contains the Pre-Discovery Report. The digital data submitted (on a DVD) with this report contain correspondence, exhibits used at the Discovery meetings, geographic information system (GIS) data, mapping documents (PDF, shapefiles, personal geodatabases and

ESRI ArcGIS 10.x Map Exchange Documents [MXDs]), or other supplemental digital information. Graphics in this Discovery Report are available as larger format graphics files for printing and as GIS data that may be printed and used at any map scale.

i. Watershed Selection

For the Discovery process, watersheds or communities are selected and analyzed at the HUC 8 level and evaluated using three major factors (or trifecta factors): population, topographic data availability and risk decile. Decile risk calculated from 9 parameters including total population density, historical population growth, predicted population growth, housing units, flood policies, single claims, repetitive losses, repetitive loss properties and declared disasters.

Valencia County located in central New Mexico encompasses an area of approximately 1,4588 square miles and portions of three HUC 8 watersheds, the Rio San Jose (13020207), Rio Puerco (13020204), and theRio Grande-Albuquerque (13020203). Major communities include the municipalities of Belen, Bosque Farms, Los Lunas, and Peralta and a number of unincorporated communities including towns of Jarales, Pueblitos, Bosque, Tome, Adelino, El Cerro, Meadowlake, Valencia, Rio Communities, Tierra Grande, Casa Colorada, Highland Meadows, and Los Chavez. . The County is bordered by Bernalillo County to the north, Torrance County to the east, Cibola County to the west, and Socorro County to the south. Tribal Lands belonging to the Pueblo of Isleta, and Pueblo of Laguna are located in Valencia County. There are no levees in the watershed that are shown to provide protection from the base flood on the DFIRMs.

Table 1 provides a status update for each community's NFIP participation, CRS rating, and current FIRMs. Six communities are participating in the NFIPand 2 Tribal communities are not participating in the NFIP. Additionally, none of the communities nor Valencia County is participating in CRS. Figure 1 shows the locations of all communities in the watershed.

Table 1: NFIP Status of Project Area Communities

County	Community Name	Community Identification Number (CID)	Participating Community?	CRS Rating	FIRM Date	FIRM Status	Population (2010 Census)
Valencia	Valencia Unincorporated Areas	350086	Yes	NR	08/19/2010	Revised	47,458
Valencia	Belen, City of	350088	Yes	NR	08/19/2010	Revised	6,502
Valencia	Bosque Farms, Village of	350142	Yes	NR	08/19/2010	Revised	3,829
Valencia	Isleta, Pueblo of	350057	No	NR	08/19/2010	Revised	6,522
Valencia	Laguna, Pueblo of	350003	No	NR	08/19/2010	Revised	11,457
Valencia	Los Lunas, Village of	350144	Yes	NR	08/19/2010	Revised	14,905
Valencia	Peralta, Town of	350040	Yes	NR	08/19/2010	Revised	3,875

2

Valencia	Rio Communites, City of	355333E	Yes	NR	08/19/ 2010	Revised	4,555

The Rio Grande is primary river in the county flowing through the center of the county. The Rio Grande flow is regulated by Cochiti Dam, the only impoundment in the Middle Rio Grande Valley. The facility is authorized to regulate Rio Grande flows for flood and sediment control and is managed by the Albuquerque District of the U.S. Army Corps of Engineers authorized by PL 86-645, Pl 543 as amended, Senate Document No. 97, and PL 88-293. The dam's construction was completed in August of 1975. The Middle Rio Grande Conservancy District (MRGCD) is the governing authority for the river and their jurisdiction runs from ditchbank to ditchbank.

The Rio Puerco is the largest tributary to the Rio Grande, it drains a watershed ares of 7,350 square miles.

Additionally as part of FEMA's Map Modernization program in 2010, Valencia County received a countywide update to the 1994 FIRMs. The effective date of the current Valencia County FIRMs is 8/19/2010.

According to the USACE National Levee Database there are 67 miles of levees representing 35 systems in Valencia County. None of these levees are accredited and none are owned by the USACE.

Community Name	CID	Population
Valencia Unincorporated Areas	350086	47,458
Belen, City of	350088	6,502
Bosque Farms, Village of	350142	3,829
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4
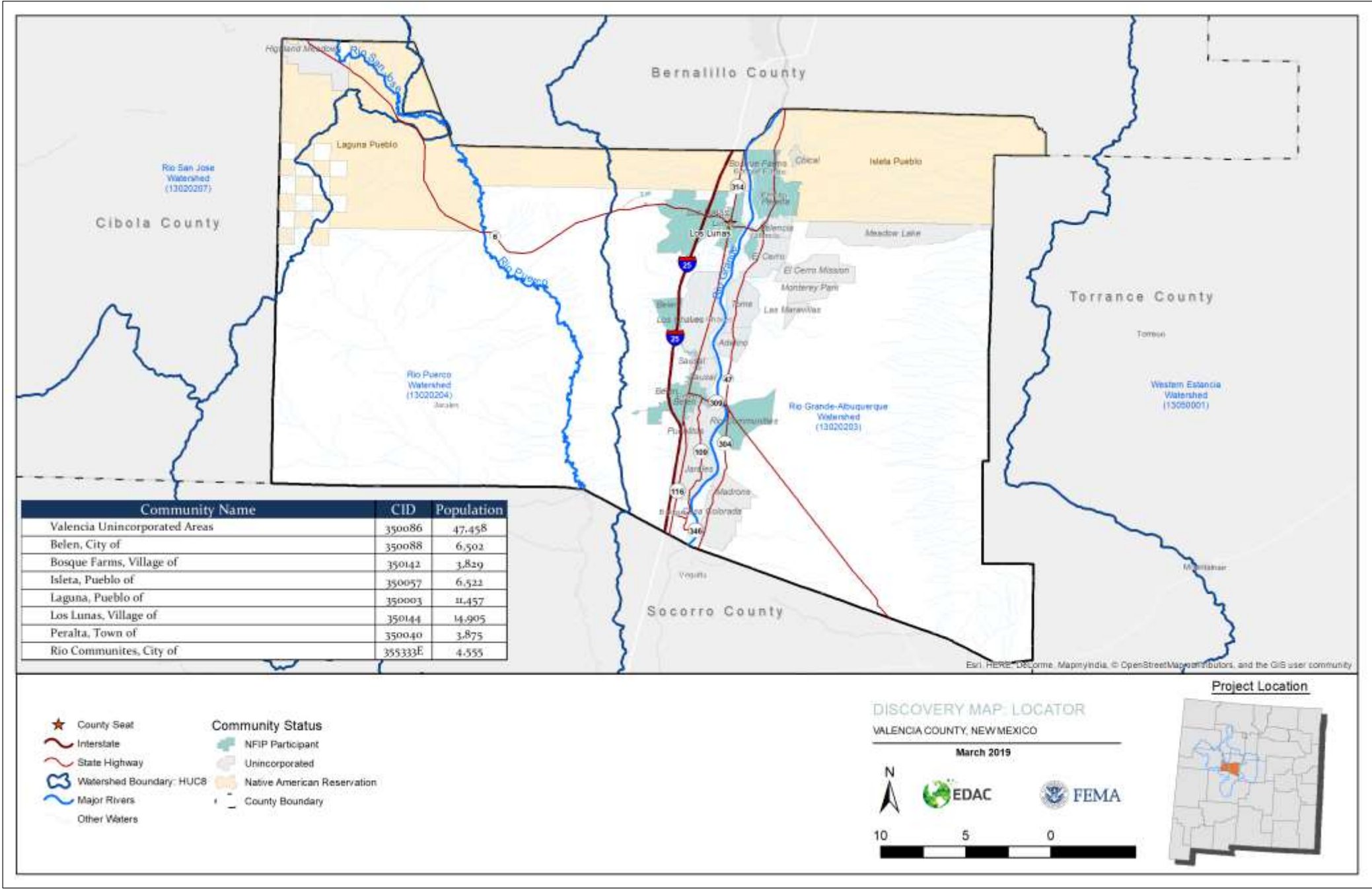
The western portion of the County is a checkboard of of BLM, state-owned and private land while the northern portion of the county is Isleta and Laguna Pueblo lands. The majority of land within Valencia County is in private ownership however, the Bureau of Land Management (BLM) owns 48 square miles; the USFS manages 25 square miles in the Manzano Mountains along the eastern edge of the county, and the Pueblos of Isleta and Laguna 217 square miles. The State of New Mexico owns 45 square miles in addition the New Mexico Department of Game and Fish owns approximately 1.4 square miles in Valencia County that it manages as wildlife refuges. The Bernardo Waterfowl Management Area contains 1,675 acres, Casa Colorado Waterfowl Management Area contains 420 acres, and the Belen Waterfowl Management Area is 230 acres.

There is one EPA Superfund(EPA Registry Id: 110010646024) site in Valencia County located at 102 Edeal Road, Los Lunas. It is the location of a former electric transfer waste salvage yard.

Risk Decile

The level of flood risk can be calculated by two methods. Risk deciles are calculated from nine parameters, including total population density, historical population growth, predicted population growth, housing units, flood policies, single claims, repetitive losses (RLs), RL properties and declared disasters.

Population

The population in this county totals *76,571* people, based on the 2010 census. Los Lunas is one of the county's highest population center (population: 14,905). There are, in total, 17 populated areas inside this watershed. Figure 2 shows the population densities within Valencia County based on U.S. Census Data 2010.

Land Use

The land use of Valencia County is predominately rural land that is either herbaceous cover or shrublands. The area along the Rio Grande is used for agricultural purposes and a small portion of the County is forested. Figure 3 identifies the land cover classes for the county. Over time there has been an increase in the urban area of Valencia County mostly on the eastern side of the Rio Grande. Figure 4 shows the changes in the percent urban coverage that have occurred in the watershed in the since 2001.
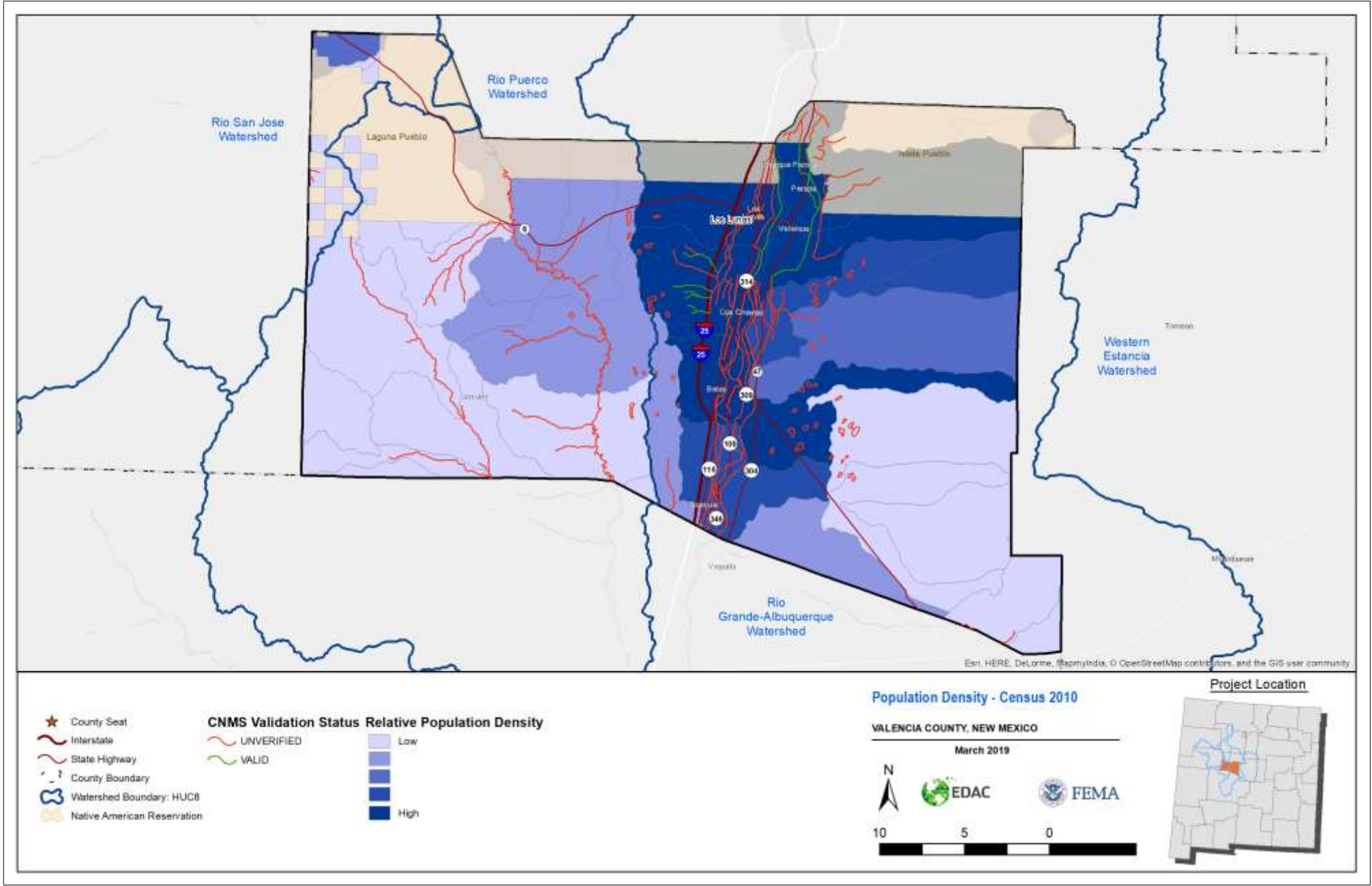
Figure 3: Valencia County Land Cover

Category	Square Miles	Percent of Watershed
Agriculture	55.8	5.2
Barren - Sparsely Vegetated	10.8	1.0
Forests	60.0	5.6
Herbaceous Cover	558.6	52.2
Open Water	3.9	0.4
Shrublands	364.0	34.0
Urban - Human Disturbance	16.3	1.5

Figure 4: Urban Change

Symbol	Category	Square Miles	Percent of Watershed
	2001 Urban	14.84	1.40%
	2014 Urban	16.3	1.54%
2001 to 2014 Change		+1.46	+0.14%

Community Status

★ County Seat
~ Interstate
~ State Highway
⌘ Watershed Boundary: HUC8
~ Major Rivers
~ Other Waters

NFIP Participant
Unincorporated
Native American Reservation
County Boundary

Urban Cover Change 2001 - 2014

VALENCIA COUNTY, NEW MEXICO

March 2019

EDAC   FEMA

Project Location

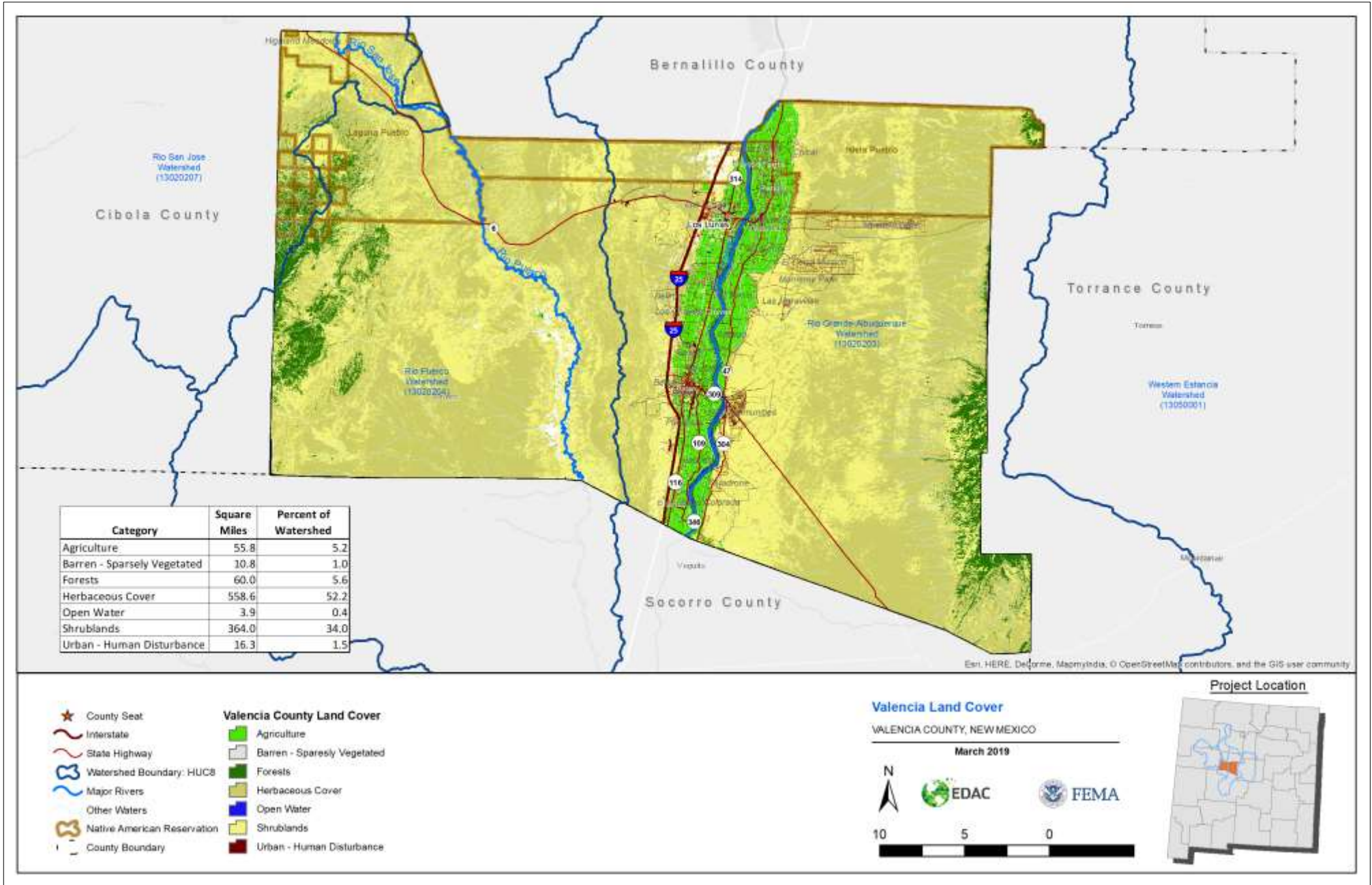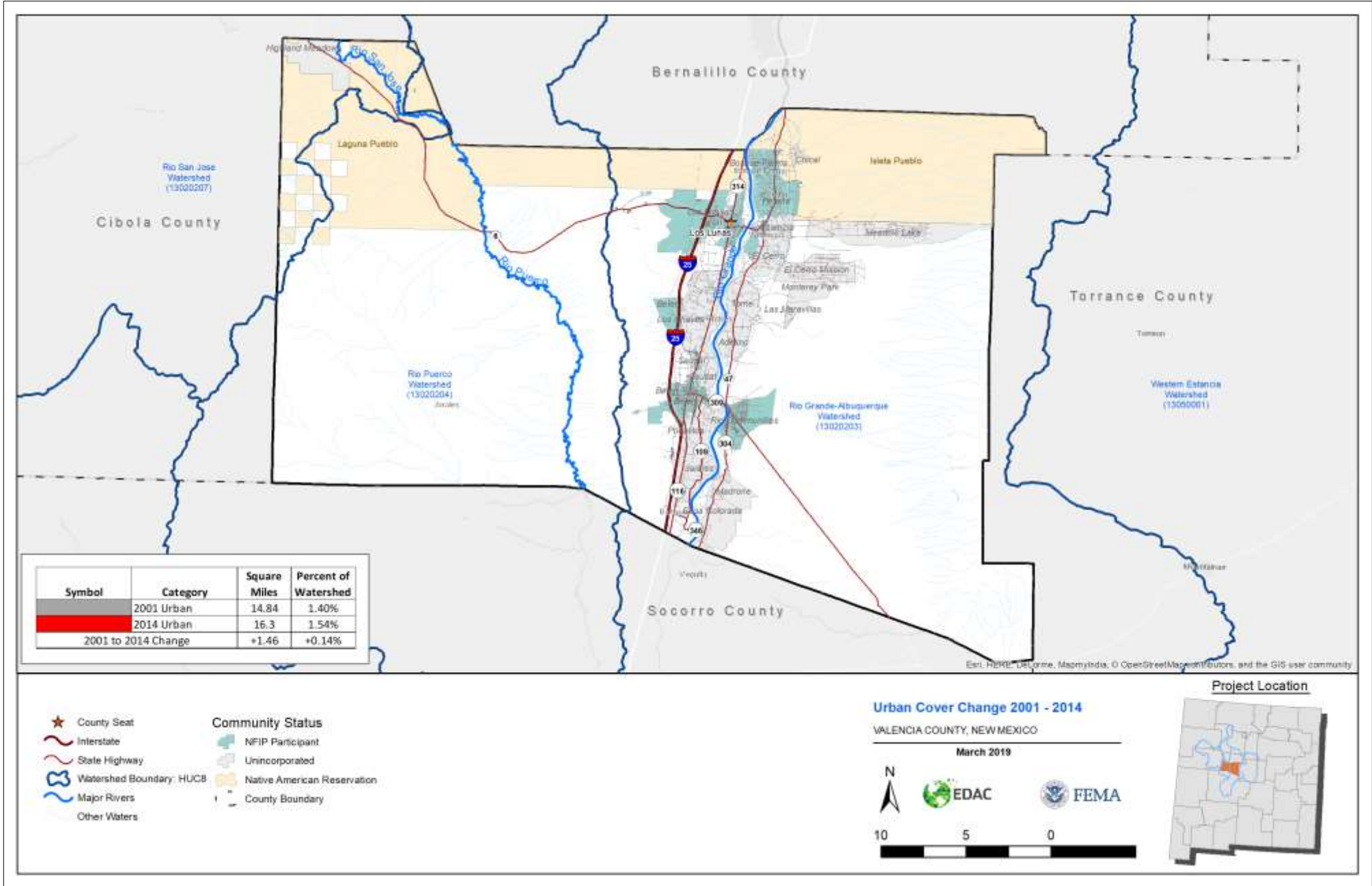10   5   0

Table 2 lists the number of NFIP insurance claims for the portions of the communities within the County. Of the insurance claims filed within the watershed, 22 percent have been filed in the community of Belen and 61 percent were filed in the unicorporated areas of the county. Figure 5 depicts the distribution of NFIP insurance claims within the Valencia County.

Table 2: Total NFIP Insurance Claims

Total NFIP Insurance Claims by Community	
Community	**Claims**
Belen	21
Bosque Farms	6
Los Lunas	4
Peralta	6
Rio Communities	1
Unicorporated Valencia County	59

In addition to NFIP claims, there are no Repetitive or Severe Repetitive Loss properties withing Valencia County, see Table 3.

Table 3: Repetitive or Severe Repetitive Loss within the Watershed

Repetitive Losses/Severe Repetitive Losses By Community			
Community	**Number of Properties**	**Total Claims**	**Average Claim Per Property**
N/A	None	None	None

Valencia County has had a history of flooding as demonstrated by presidential disaster declarations with 3 issued in the past 42 years. A recent Presidential Disaster Declaration included many counties near and adjacent to Valencia County, but did not include Valencia County itself: DR-4148, declared in July 2013, included Socorro County to the south and Bernalillo County to the north and the Pueblo of Isleta. The County did however received damages during this event. Table 4 lists recent disaster declarations for multiple hazards within the watershed.

Table 4: Disaster Declarations in the Watershed

Date of Declaration	Community Declared	For Hazard
9/22/2013	Pueblo of Isleta	Severe Storms and Flooding, and Mudslides
7/26/2003	Valencia County	Severe Storms and Flooding

Figure 5: Single Claims in the Watershed

Claim Totals

Community	Claims
Belen	21
Bosque Farms	6
Los Lunas	4
Peralta	6
Rio Communities	1
Unicorporated Valencia County	59
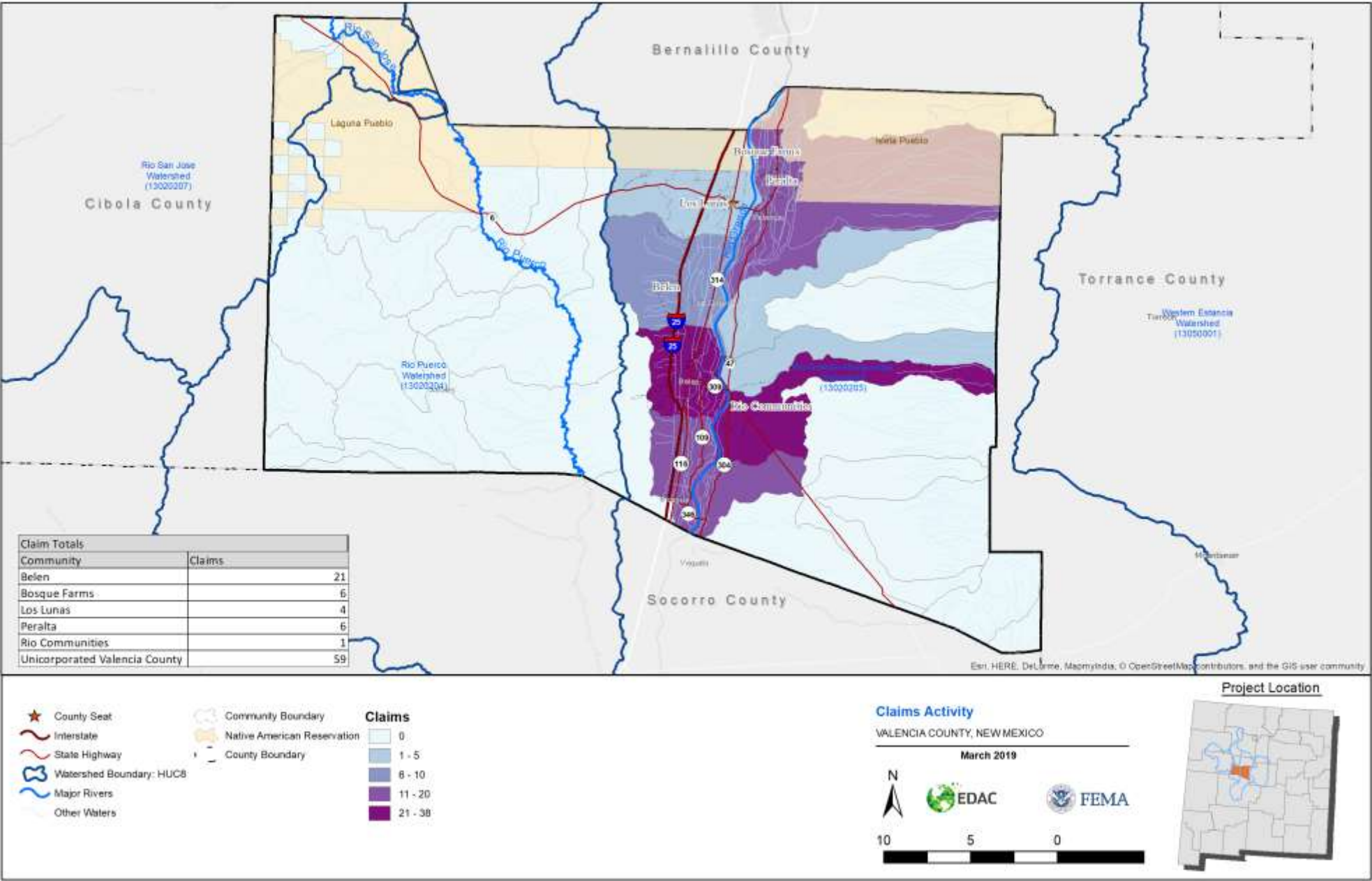
A risk decile is calculated at the watershed level. The scale of risk decile ranking is 1 to 10, with 1 being the highest and 10 being the lowest ranking for a portion of the watershed. Table 5 lists the overall rankings of the *NAME of WATERSHED* Watershed when compared nationally and regionally to other HUC 8 watersheds.

Table 5: Watershed Risk Factor Rankings

NAME of WATERSHED Watershed Selection Rankings			
National Risk Factor Rank:	XX	Region 6 Risk Factor Rank:	XX
National Risk Decile:	XX	Region 6 Risk Decile:	XX
Average Annualized Loss:	$XXX,XXX,XXX	Average Annualized Loss:	$XXX,XXX,XXX
National Average Annualized Loss Rank:	XX	Region 6 Average Annualized Loss Rank:	XX
National Overall Rank:	XX	Region 6 Overall Rank:	XX

Topographic Data

Recent or pending planned acquisitions of topographic data have been made for Valencia County. Topographic coverage totals are at 100 percent for the entire watershed. The Middle Rio Grande Council of Governments' 2018 Lidar Project collected LiDAR data for the central portion of the county. The 2018 Rio San Jose, Rio Puerco, the 2017 Mountain Air District, Cibola National Forest and other NRCS/FEMA Lidar acquisitions the remainder of the County. All of the LiDAR data is available from the NM RGIS Clearinghouse. Figure 6 provides a snapshot of CNMS factors for each stream segment, the HUC 12 risk decile, and the availability of topographic data.

CNMS

Significant streams in this watershed include the Rio Grande and the Rio Puerco. The USGS provides a National Hydrologic Dataset (NHD) that can be used to identify stream miles that reflect drainage areas of one square mile from available topographic data. The NHD stream mileage may be used to gain a sense of the total potential stream miles for a watershed. Using the NHD, there are approximately *1,404* miles of streams in Valencia County.

The Coordinated Needs Management Strategy (CNMS) Inventory provides a snapshot of the status and attributes of currently studied streams existing within FEMA's floodplain study inventory. In general, the stream mileage shown in CNMS reflects streams with an approximately one-mile drainage area and that currently have effective Special Flood Hazard Areas (SFHA) designated for them. CNMS does not reflect the total potential of stream miles to be studied within a watershed.

In addition to listing the miles of studied stream within a watershed, CNMS documents certain physiological, climatological, or engineering methodological factors that may have changed since the date of the effective study. The stream miles shown in CNMS are attributed with an evaluation of a Validation Status and Status Type that allows an examination of the condition of a given study or group of studies. Studies which are considered Valid in CNMS are the only studies which contribute to the New Validated or Updated Engineering (NVUE) metric.

The NVUE metric is used as an indicator the status of studies for FEMA's mapped SFHA Inventory. Those studies which are categorized as 'unverified', typically indicate that there are some factor of change since the SFHA became effective or may have a deficiency warranting restudy. CNMS stream mileage categorized as 'Requires Assessment' require further input to determine their validity – often because they represent paper inventory or non-modernized studies. CNMS aids in identifying areas to consider for study during the Discovery process by highlighting needs on a map, quantifying them (mileage), and providing further categorization of these needs in order to differentiate factors that identify the needs.

Table 6 compares the NHD data to the CNMS data and summarizes the Validated NVUE stream mileage from CNMS for the watershed.
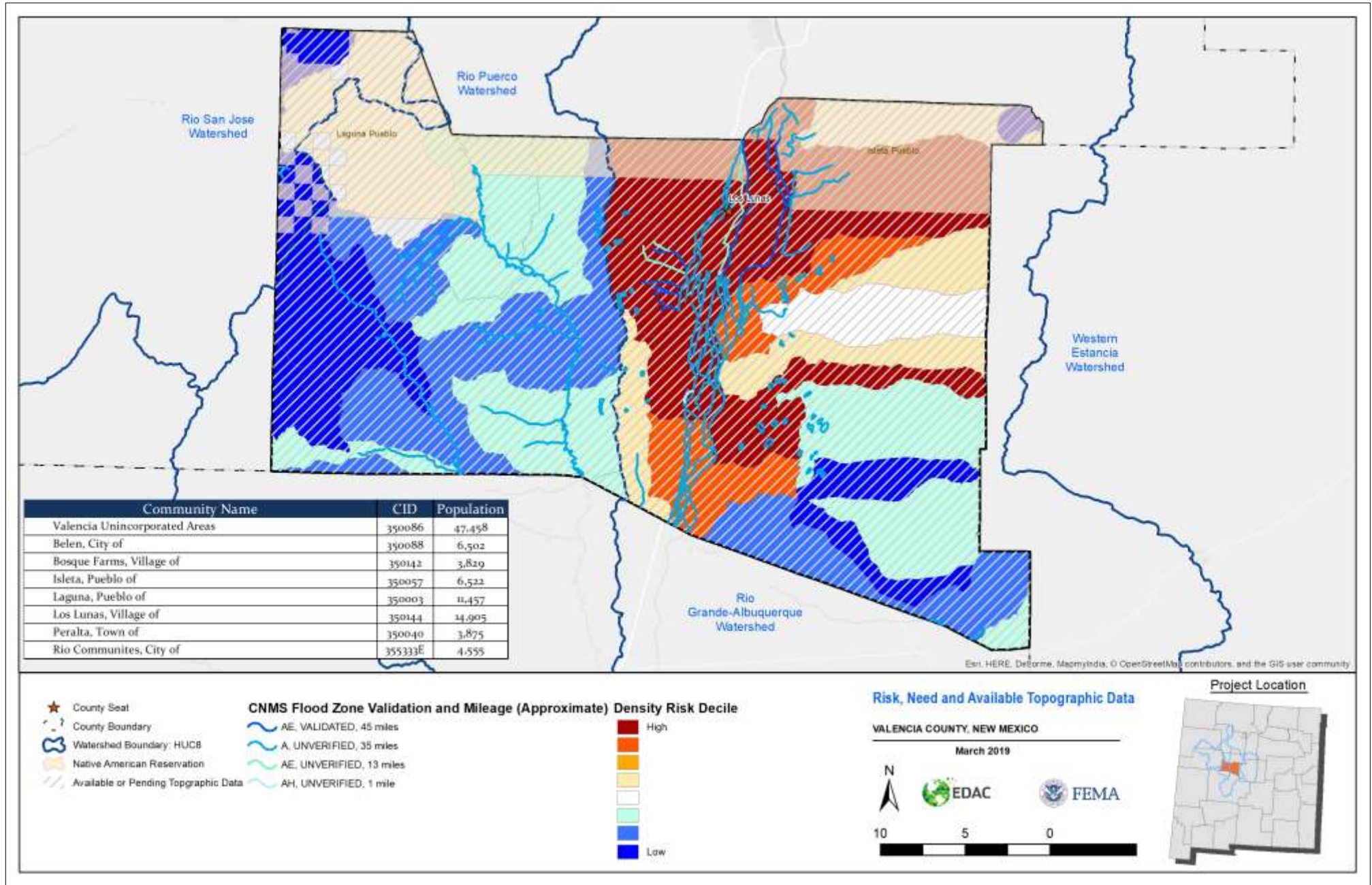
Table 6: NVUE Approximate Stream Mileage in the Watershed

NVUE Validation	Stream Miles
NHD Streams (streams with a drainage area of greater than one square mile)	1,404
CNMS Streams (streams with effective SFHA)	381.95
Stream Miles not accounted for in CNMS	1,022.05
CNMS Valid Zone AE / AH	44.73
CNMS Valid Zone A	0
CNMS Unverified Zone AE / AH	13.97
CNMS Unverified Zone A	323.25
CNMS Zone AE / AH Requiring Further Assessment or in the process of being studied	0
CNMS Zone A Requiring Further Assessment	0
All Stream Miles not accounted for in CNMS as there are no effective SFHAs (sum of the below)	1,022.05
Stream Miles not accounted for in CNMS that would fall in land that *could be* developed	1,221.14
Stream Miles not accounted for in CNMS that would fall in land that *could not be* developed	182.86

Within Valencia County and using these criteria from CNMS, approximately 323.25 miles of Zone A and 13.97 miles of Zone AE areas were identified as being unverified. Streams included in the unverified grouping include the Rio Grande and the Rio Puerco with approximately 0 miles of Zone AE flagged as requiring further assessment or are in the current process of being studied with on-going projects. Additionally, 0 miles of Zone AH and approximately 44.73 miles of Zone AE in the watershed were characterized as being Valid under the NVUE metrics.

Figure 6 provides a snapshot of CNMS factors for each stream segment, the HUC 12 risk decile, and the availability of topographic data. The combination of these three factors resulted in the selection of NAME OF WATERSHED Watershed for a Discovery Project.

Figure 6: Risk, Need and Available Topographic Data

Community Name	CID	Population
Valencia Unincorporated Areas	350086	47,458
Belen, City of	350088	6,502
Bosque Farms, Village of	350142	3,829
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Peralta, Town of	350040	3,875
Rio Communites, City of	355333E	4,555

II.   Discovery Efforts

i.   Engagement Plan

Pre-Discovery Community Engagement

Table 7 provides the members of the Regional Project Team was made up of the following staff.

Table 7: Regional Project Team

Organization	Name	Project Role
FEMA R6	Jerry Clark	Project Monitor
FEMA R6	Shanene Thomas	Tribal Liason and Mitigation Planning
FEMA R6	Trey Rozelle	Flooplain Management & Insurance
FEMA R6	Christie King	Hazard Mitigation Assistance
NMDHSEM	Veronica Chavez	NFIP Coordinator
NMDHSEM	Wendy Blackwell	State Hazard Mitigation Officer
Earth Data Analysis Center	Shawn L. Penman	CTP Coordinator

FEMA and the Regional Project Team were in contact with all Watershed stakeholders via letters, email, and phone calls before this Discovery meeting to request local participation. In addition to assisting scheduling the meeting, locals were asked to help identify additional key people who should be included in the Discovery process and acquire any data that will assist in the risk identification and assessment for Valencia County. A detailed list of Communities, local officials, federal, state and regional agencies that were invited to participate in the Discovery Process is included with the supplemental digital data accompanying this report.

In preparation for the Discovery meeting, the Regional Project Team:

- Gathered information about local flood risk and flood hazards
- Reviewed mitigation plans to understand local mitigation capabilities, hazard risk assessments, current or future mitigation activities, and areas of mitigation interest
- Mapped known and available Grant Activity in the Watershed
- Mapped known and available Claims Activity in the Watershed
- Mapped Percent Urban Cover in the Watershed
- Mapped Urban Change from 2001 – 2014
- Mapped Population Density in the Watershed

The Regional Project Team began outreach efforts to the local governments within the Watershed, Congressional and public officials, to inform them of the Discovery process and to invite them to participate and contribute information about the Watershed about water resource

14

concerns. Discussions are being held with federal and state agencies about potential partnership opportunities, as well as their help in identifying flood risk throughout the watershed.

Table 8: FEMA History of Engagement

Community Name	Type of Engagement	Date	Agency	Comments
Valencia County	New Mexico Floodplain Managers Association, Sessio, "Mapping Priorities for the State of New Mexico" Data Gathering Effort	4/17/2014	FEMA, RAMPP, STATE, EDAC	Data hosted on RMD Sharepoint
Valencia County	Topographic Acquisition / LIDAR	2017/2018	MRCoG, FEMA, NRCS	Coordinated through NM Lidar Subcommittee
Valencia County	FIRM Map Updates	2010	FEMA	

Table 9: Mitigation Plan Status

Community Name	Community Mitigation Action:	Hazard Mitigation Plan Name:	Plan Status:	Plan Approved	Plan Expires
New Mexico		New Mexico State Hazard Mitigation Plan	Approved	9/7/2018	2023
Valencia County • City of Belen • Town of Peralta • Village of Bosque Farms • Village of Los Lunas		Valencia County/ City of Belen/Town of Peralta/Village of Bosque Farms/ Village of Los Lunas Hazard Mitigation Plan	Approved	6/1/2015	5/30/2020
Pueblo of Laguna		Laguna Pueblo Hazard Mitigation Plan	Approved	7/9/2015	7/8/2020
Pueblo of Isleta		N/A	Expired		

Figure 7 displays the locations and types of mitigation grant activity in Valencia County which have been approved by FEMA. This map only shows approved grant activity. There may be additional grants being pursued at both the state and local level within the watershed.

Figure 7: Grants Activity
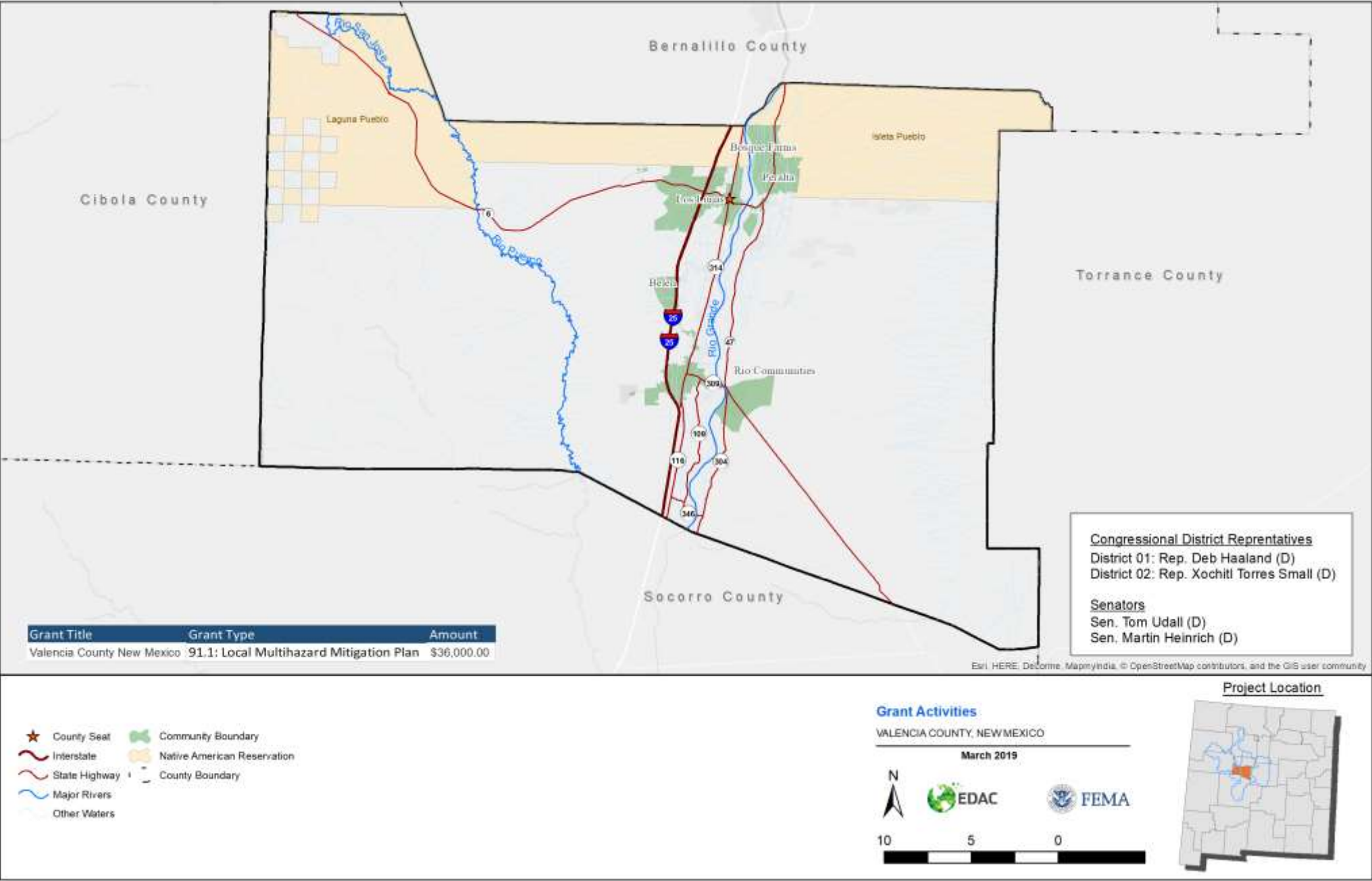
Pre-Discovery Congressional and Media Engagement

In order to achieve success with any Region 6 Risk MAP project, members of Congress and their staff members, as well as the media must be aware and understand the study process. Working with FEMA External Affairs to inform both legislators and the media will improve credibility and opens the door to understanding risk in a more holistic, comprehensive manner. An initial contact briefing of the legislators will occur prior to the Discovery meeting.

Congresswoman Xoxhitl Torres Small, New Mexico 2nd Congressional District, serves on the House Committee on Homeland Security and is Chair of the Subcommittee on Oversight, Management and Accountability.

Table 10: Congressional Information

U.S. Senator		Term Expiration	FEMA History of Engagement
Tom Udall (D)		2020	November 2018, Congressional & Intergovernmental Affairs Liaison, Juan J. Ayala met with staffers
Martin Heinrich (D)		2024	November 2018, Congressional & Intergovernmental Affairs Liaison, Juan J. Ayala met with staffers
U.S. Representative	**District Number**	**Term Expiration**	**FEMA History of Engagement**
Xochitl Torres Small (D)	2	2021	Congressional & Intergovernmental Affairs Liaison, Juan J. Ayala anticipates meeting with staffers in Spring 2019
Debra Haaland (D)	1	2021	Congressional & Intergovernmental Affairs Liaison, Juan J. Ayala anticipates meeting with staffers in Spring 2019

State Senators	
District	**Name**
29	Gregory A. Baca (R)
30	Clemente Sanchez (D)
39	Elizabeth Stefanics (D)

State Representatives	
District	**Name**

07	Kelly K. Fajardo (R)
08	Alonzo Baldonado (R)
49	Gail Armstrong (R)
50	Matthew McQueen (D)
69	Harry Garcia (D)

Contact information for the community and additional stakeholders can be found with the supplemental digital data.

Tribal Engagement
The two Tribal Nations in Valencia County, the Pueblo of Isleta and the Pueblo of Laguna were invited to participate in the Discovery process with the other incorporated communities and the county. The FEMA Region 6 Tribal liason and contacted the Tribal Nations and coordinated separate meetings with each Tribal Nation.

ii. Pre-Discovery Data Collection

Table 11: Data Collection for the Watershed

Data Types	Deliverable/Product	Source
Average Annualized Loss Data	Discovery Map Geodatabase	Brian Shumon, FEMA Region II
Boundaries: Community	Discovery Map Geodatabase	New York State GIS (NYS GIS) Clearinghouse/Pennsylvania Spatial Data Access
Boundaries: County and State	Discovery Map Geodatabase	National Atlas of the United States
Boundaries: Watersheds	Discovery Map Geodatabase	USGS NHD
Census Blocks	Discovery Map Geodatabase	U.S. Census Bureau
Contacts	Table	Local Web Sites, State/FEMA Updates

Data Types	Deliverable/Product	Source
Community Assistance Visits	Discovery Report	Community Information System (CIS)
Community Rating System (CRS)	Discovery Report	FEMA's "Community Rating System Communities and Their Classes"
Dams and Levees	Discovery Map Geodatabase	FEMA Mid-term Levee Inventory (MLI)/USACE/New York State Department of Environmental Conservation/NYS GIS Clearinghouse

iii.   Discovery Meeting

One two-hour workshop, will be at in Los Lunas and two potential tribal meetings will also be held. Workshop times and locations are shown in Table 12. Each Workshop site was prepared with a series of stations, envisioned to be an interactive setting for the Regional Project Team and Discovery Workshop attendees listen, discuss and document any issues for the Watershed.

Table 12: Project Discovery Workshop Times and Locations

Workshop	Date and Time	Location
1	March 4, 2019 1:00 pm – 3:00 pm	Valenciay County Council Chambers, 444 Luna Ave, Los Lunas, NM 87031
2		Pueblo of Isleta
3	March 5, 2019, 1-3pm	Pueblo of Laguna, K-Center 22 Bay Tree Rd., Paraje, NM, 87007

Jerry Clark, the FEMA Project Monitor and CTP personnel, will greet each attendee as they arrive. Attendees will be rotated around the following four Discovery stations:

- Community Benefits and Grant Opportunities *(Grants station)* – Maps of current floodplain-related grants; risk, needs and topographic availability; RL/SRL properties; letters of map change (LOMCs); urban changes over the last 5 years; and single claims. The station also had handouts on various FEMA grant programs.

19

- Mitigation Planning and Mitigation Activities *(Planning station)* – Handouts on mitigation plans, understanding Risk MAP and determining risk.

- NFIP Community Actions *(Compliance and Mitigation station)* – Effective FIRMs, FIS and LOMCs; maps of RL/SRL properties; single claims; and urban changes over the last 5 years.

- Risk Identification and Communication *(Mapping station)* – Maps of risk/need/topographic availability, LOMCs, population density in the watershed, urban change in the watershed, estimated dollar exposure of parcels near SFHA areas, high-water marks and low water crossings.

At each station, attendees were asked to actively contribute information about concerns in the Watershed by identifying a relevant location on the large watershed map and then providing a short explanation on the comment form. The activity at the stations was intended to be interactive where attendees and staff at the stations work together to listen discuss and document any topical items for the watershed. Members of the Regional Project Team (FEMA, State of New Mexico) were at the stations to answer questions and engage the attendees. During each workshop, Regional Project Team members requested that attendees provide any additional information within 2 weeks of the workshop.

Each station was equipped with a series of large-format watershed maps with an aerial photo of the Watershed displayed, along with community boundaries and road names to assist in identifying areas of concern. Additionally, the stations had several 11-inch by 17-inch laminated maps of the watershed with information related to that station's content.

Information sheets were collected at each station for locations that were identified and labeled on the Discovery watershed maps. These information sheets are included in the external files included with this report.

iv. Discovery Implementation (TO BE COMPLETED POST-DISCOVERY)

All Discovery Workshops were attended by local stakeholders. A full list of attendees is provided in the sign-in sheets included with the supplemental digital data accompanying this report. Some attendees included:

- Local community elected officials and councilpersons
- Local floodplain managers, emergency management staff, community planners, public works staff
- Add other notable attendees

The Workshops afforded personal, interactive communication with attendees at each station. The Project Team interviewed attendees and discussed areas of positive mitigation and areas of continuing concern for the Watershed as a whole. As

attendees visited each station, they not only discussed their own local concerns but also listened to the concerns of others in the Watershed.

Attendees were polled by the FEMA Project Monitor as they exited the Workshop. Verbal feedback from the attendees indicated they felt the Workshop was an opportunity to express their issues and concerns for the Watershed. Many attendees were appreciative of the chance to speak with the various Regional Project Team members from FEMA and the State of Name of State. The community perception conveyed to FEMA was that attendees felt more engaged in the process to determine where needs and projects may be identified.

v.   Data Gathering Overview

Information about the Name of Watershed Watershed was gathered both prior to the Discovery Workshops and interactively during the Workshops. Much of data collected in pre-discovery was obtained from FEMA or other national datasets. Additional data was collected from NMRGIS, and local communities via their public web sites. Table 13 summarizes the data collected prior to the Discovery Workshop and the primary sources of the data.

During the pre-discovery process phone calls were made to local FPAs, Emergency Managers, and Mitigation planners to collect current and proposed mitigation actions. This data was collected in spreadsheets and will be used by FEMA to track mitigation actions within the region. The final spreadsheets are included in the supplemental digital data.

Table 13: Data Collection Summary – Pre-Discovery Workshop

Data Location	Data Custodian	Data Set Description
Watershed-wide	FEMA	Effective FIRM and FIS and backup information available from FEMA's Map Service Center and FEMA Library
Watershed-wide	FEMA	LOMC locations from FEMA's Map Service Center and FEMA Library
Watershed-wide	FEMA, Valencia County	Locations of RL/SRL properties and Claims
Watershed-wide	FEMA	Location of Grants being funded
Watershed-wide	FEMA	Participation in the NFIP, Community Rating System (CRS) ratings
Watershed-wide	FEMA	Disaster Declarations
Watershed-wide	FEMA	CNMS information

Data Location	Data Custodian	Data Set Description
Watershed-wide	FEMA	AAL data
Watershed-wide	FEMA	High water marks (HWMs) and associated reports
Watershed-wide	FEMA	Approved HMPs
Watershed-wide	FEMA, NMRGIS, EDAC	Location of available or planned areas of updated LiDAR or other topographic data
Watershed-wide	FEMA, U.S. Census, NMRGIS, EDAC	Transportation features
Watershed-wide	FEMA, U.S. Census, NMRGIS	Populated places and population characteristics
Watershed-wide	USGS	Watershed HUC (8 & 12) boundaries, NHD streams, stream gage information, land use and land cover
Watershed-wide	USDA	NAIP Imagery
Watershed-wide	Local FPAs, Mitigation Planners and Emergency Managers, FEMA	Mitigation Actions identified by local stakeholders and collected by phone call
Watershed-wide	USFWS	Critical habitat locations
Watershed-wide	USGA	Gage locations
Watershed-wide	USACE	Rio Grande Information
Watershed-wide	EPA	Superfund site locations and details

Table 14: Data Collection Summary - During and After Discovery Workshop

Item	Flooding Source	Information Provided By	Discovery Workshop Comment Summary

Item	Flooding Source	Information Provided By	Discovery Workshop Comment Summary

III. Watershed Findings (To be Completed Post-Discovery)

There are no Repetitive Loss (RL) or Severe Repetitive Loss (SRL) Claims in Valencia County

Figure 9: Letter of Map Changes (LOMCs)

Esri, HERE, DeLorme, Mapmyindia, © OpenStreetMap contributors, and the GIS user community

★	County Seat		Community Boundary	● Letter of Map Admendment (LOMA) (325)
	Interstate		Native American Reservation	● Letter of Map Revision - Fill (LOMR-F) (52)
	State Highway		County Boundary	Letter of Map Revision (LOMR) - None
	Watershed Boundary: HUC8			
	Major Rivers			
	Other Waters			

CNMS Validation Status

UNVERIFIED

VALID

Letter of Map Change (LOMC) Activity

VALENCIA COUNTY, NEW MEXICO

March 2019

N

EDAC

FEMA

10   5   0

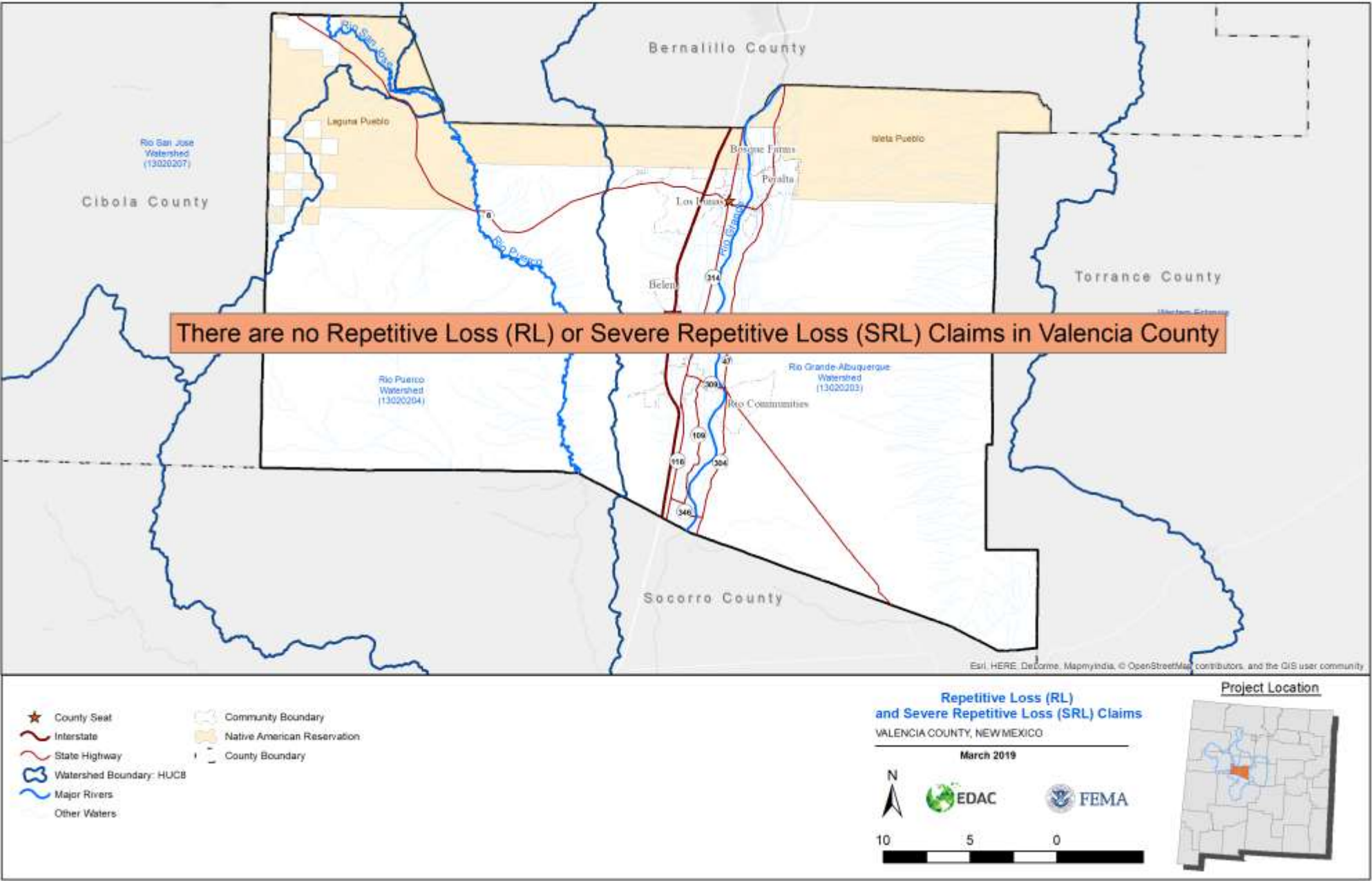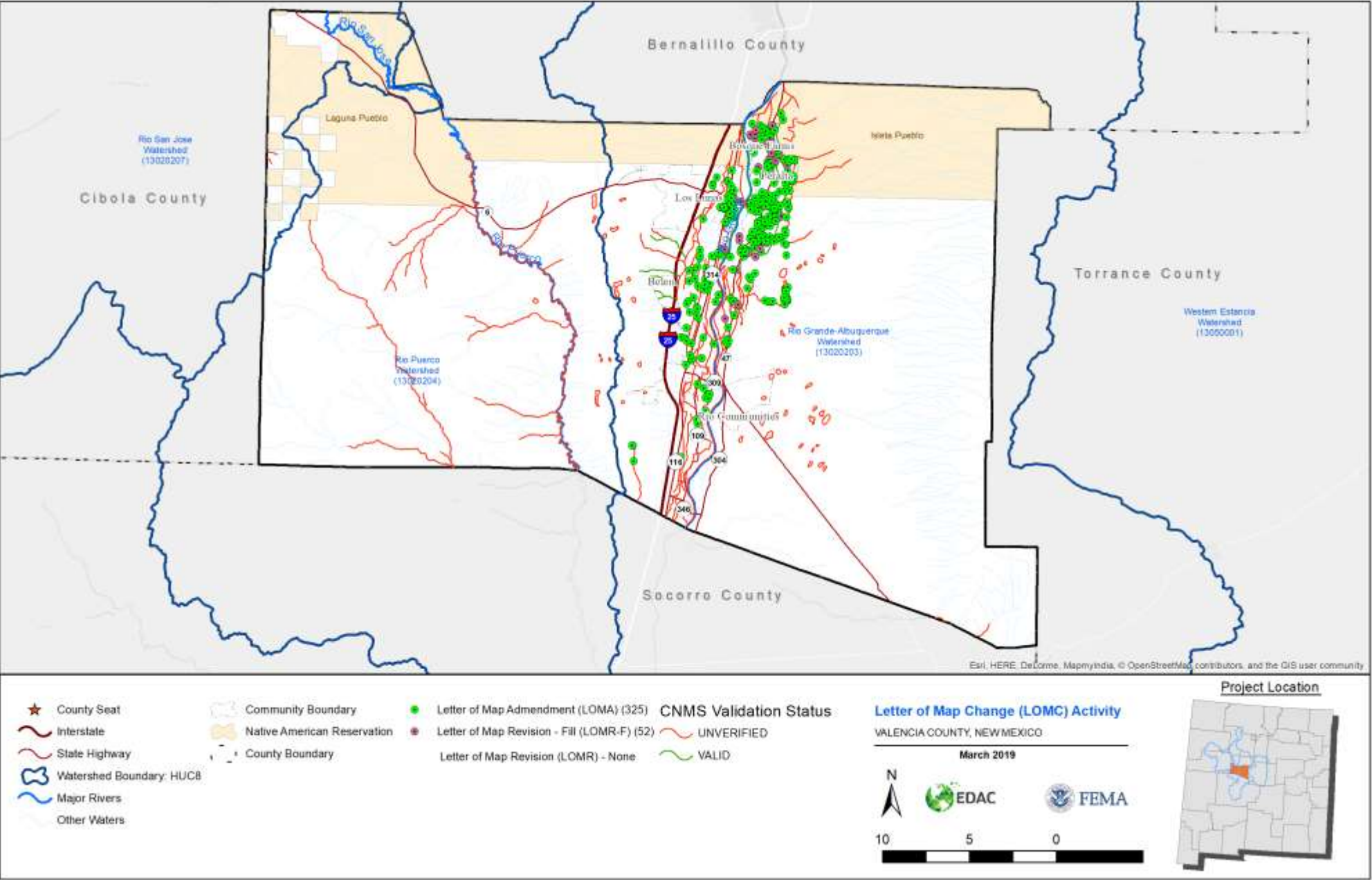Project Location

i. Pre-Discovery Hydrology

Two limited reviews of hydrologic information were performed for Discovery analysis within Valencia County. These reviews were focused on:

- Review of Peak Discharges in the watershed
- Limited Gage analysis for the watershed

For the watershed as a whole, the **one-percent** annual chance peak discharges were reviewed for all streams within a community and across community boundaries looking for discharge anomalies, places where LOMRs demonstrate that the effective discharges may be suspect on a more global basis. Any notes were added if these changes can be eliminated as a concern due to hydrologic factors including local flood control structures, detention, flow break outs, sinks or other natural or manmade factors that may significantly alter hydrology flows. Finally, a watershed wide high-level gage analysis was reviewed comparing the information on any available gages within the watershed that had appropriate historical information to the effective FIS, discharges for streams with gages. This analysis could potentially flag any anomalies that would indicate that the hydrology may be out of date, too high, or too low for sub-basin areas within the watershed.

Review of Peak Discharges

Peak discharges were reviewed based on available FIS reports, hydraulics models, flow gages and available LOMRs within the watershed at the crossing of SHFA areas at corporate limits (county, city and town). A comparison of discharges was made for the same streams across county boundaries as shown in Table 15, Discharge Comparison at Community Limits**.**

Table 15: Discharge Comparison at Community Limits

Stream Name	County/Parish	Effective one-percent annual chance discharge (cfs)	Effective Discharges Source	Notes
Rio Grande at upstream corporate limits of Bosque Farms	Valencia	18,100	County FIS	

Table 16: Summary of Hydrologic Analysis

Stream Name	Drainage Area from USGS Gage (square mile)	Effective discharges Source	Effective one-percent annual chance discharge (cfs)	95 confidence limits lower (cfs) (Gage)	one-percent annual chance discharge from PeakQ (Gage)	95% confidence limits upper (cfs) (Gage)	Number of peaks in record
Rio Grande at upstream corporate limits of Bosque Farms	18,100	N/A	18,400				
Rancho Cielo Arroyo 3	3.66	N/A	3,140				
Rancho Cielo Arroyo 3, Tributary 1	1.09	N/A	1,710				
Rancho Cielo Arroyo 5	2.59	N/A	2,640				
Rancho Cielo Arroyo 5, Tributary 1	0.82	N/A	1,490				
Rancho Cielo Arroyo 6	6.05	N/A	4,030				
Rancho Cielo Arroyo 8	6.19	N/A	4,080				
Rancho Cielo Arroyo 9	2.68	N/A	2,680,				
Rancho Cielo Arroyo 9, Tributary 1	0.88	N/A	1,540				

ii. Pre-Discovery Hydraulics and Floodplain Analysis

Hydraulics, hydrology, floodplains, and floodways were reviewed based on the FIS reports, available hydraulic models, available hydrologic models, and FIRMs.

Table 17 shows the hydraulic analyses used for streams studied by enhanced methods.

Table 17: Summary of Hydraulic Analysis

Stream Name	Validation Status	Date of Effective Analysis	Hydrology Model	Hydraulic Model
Rio Grande	Valid	2/9/2000	Regression Equations	HEC-2
Rio Grande East Overbank	Valid	2/9/2000	Regression Equations	HEC-2
Rio Grande East Split Flow	Valid	2/9/2000	Regression Equations	HEC-2
Rio Grande West Overbank	Unverified	2/9/2000	Regression Equations	HEC-2
Rio Grande West Split Flow	Valid	2/9/2000	Regression Equations	HEC-2
Rancho Cielo Arroyo 3	Valid	8/31/2008	HEC-1	HEC-RAS 3.1.3
Rancho Cielo Arroyo 5	Valid	8/31/2008	HEC-1	HEC-RAS 3.1.3
Rancho Cielo Arroyo 6	Valid	8/31/2008	HEC-1	HEC-RAS 3.1.3
Rancho Cielo Arroyo 8	Unverified	8/31/2008	HEC-1	HEC-RAS 3.1.3
Rancho Cielo Arroyo 9	Valid	8/31/2008	HEC-1	HEC-RAS 3.1.3
Rancho Cielo Arroyo 9 Tributary No. 1	Unverified	8/31/2008	HEC-1	HEC-RAS 3.1.3

iii. Pre-Discovery CNMS Analysis

Table 18 shows the detailed study streams in Valencia County that have failed one or more validation elements during the CNMS stream reach level validation process. The CNMS validation elements attempt to identify changes to the Physical Environment, Climate and Engineering Methodologies since the date of the Effective Analysis (different from the Effective issuance date). Per the CNMS validation process, the study is considered as having a need or assigned an 'Unverified' status, if one of seven critical elements fail, or if four or more of the 10 secondary elements fail during stream reach level validation.

Table 18: CNMS Analysis

Stream Name	County/Parish	Validation Status	Failed CNMS Elements
Rancho Cielo Arroyo 9 Tributary No. 1	Valencia	Unverified	
Rancho Cielo Arroyo 8	Valencia	Unverified	
Rio Grande West Overbank	Valencia	Unverified	

Table 19 provides a description of the validation elements that failed as identified in the CNMS database.

Table 19: CNMS Category Descriptions

Element Name	Issue being identified by the Element	Element Description

Summary of CNMS Concerns

IV. Watershed Options (To be Completed Post-Discovery)

In conjunction with the assessment of risk, need, and the availability of topographic data, as well as the input of stakeholders within in this Watershed, future projects within the Name of Watershed Watershed are recommended. FEMA looks to promote mitigation action within the watershed. After internal and partner review of the communities within the watershed, the following are overarching opportunities identified to promote community action within the watershed.

Table 20 lists some potential needs in the Watershed and actions that could be taken under each of the four areas discussed during the Discovery meetings, including:

- Risk Identification and Communication – traditional flood studies and data updates
- NFIP Community Actions – insurance-related mitigation or information
- Mitigation Planning and Mitigation Actions – items related to planning updates
- Community Benefits and Grant Opportunities – outreach and disaster activities as well as non-flooding hazards like safe room information

Risk Identification and Communication
NFIP Community Actions
Mitigation Planning and Mitigation Actions
Community Benefits and Grant Opportunities

BFE = Base Flood Elevation	LiDAR = Light Detection and Ranging System
CAV = Community Assistance Visit	LOMR = Letter of Map Revision
CFM = Certified Floodplain Manager	LSU = Louisiana State University
CLOMR = Conditional Letter of Map Revision	NFIP = National Flood Insurance Program
CNMS = Coordinated Needs Management Strategy	NVUE = New, Validated, or Updated Engineering
CRS = Community Rating System	PMRS = Physical Map Revision
DEM = Digital Elevation Model	Risk MAP = Risk Mapping, Assessment, and Planning
FIRM = Flood Rate Insurance Map	RL/SRL = Repetitive Loss/Severe Repetitive Loss
FPA = Floodplain Administrator	SFHA = Special Flood Hazard Area
G&S = FEMA's *Guidelines and Standards for Flood*	SRA = Sabine River Authority
Hazard Mapping Partners	TNRIS = Texas Natural Resources Information System
H&H = hydrologic and hydraulic	TXDOT = Texas Department of Transportation
Hazus = Hazards U.S.	USGS = U.S. Geological Survey
HMP = Hazard Mitigation Plan	

Table 21 provides specific evaluation guidelines for streams or areas that could benefit from additional study. Any FEMA-based metrics that would be met if the need or issue was addressed are noted, as well as any current FEMA map actions that would affect the activity. Any comments or concerns raised by a stakeholder during the Discovery process that could be tied to one of the needs or actions for the Watershed are also noted. Some needs/actions are listed that were not raised by any specific community but were identified as general improvements that could be made in the Name of Watershed Watershed to meet general FEMA regional goals.

Needs are identified as being on the critical path as high, medium, or low priority or as a task that could be assigned to a State or local community to complete. These definitions are also included in Table 21.

- **High** – The local community would immediately benefit from the action and FEMA's metrics would also be met.
- **Medium** – The local community would benefit over the longer term from the action and a portion of FEMA's metrics may be met.
- **Low** – The local community activities can continue without this revision and FEMA's metrics are not affected.
- **Community Action** – The activity would be more appropriate as a community-led action rather than a FEMA-led action.

Table 21 Metrics and Rankings of Needs

Item	Description of Need		Impacts From Any Current Map Actions	FEMA Metric or Community Benefit	Evaluation	Relates to Community Comment Number
	Evaluation Guide **High** – Local community would immediately benefit from the action, and FEMA's metrics would also be met **Medium** – Local community would benefit over the longer term from the action, and a portion of FEMA's metrics may be met **Low** – Local community activities can continue without this revision, and FEMA's metrics are not impacted **Community Action** – Activity would be more appropriate as a community-led action rather than a FEMA-led action					
	Location of Need/Project	**Details**				
		•	•	•		
		•	•	•		

i. Project Prioritization (To be Completed Post-Discovery)

Flood risk projects are intended to be initiated and cataloged at a HUC-8 unit. This means that when a project is initiated, all flood hazards within the HUC-8 will be evaluated to determine the project scope within that HUC-8 boundary. Evaluation means that risk, need, available data, and desired output products are assessed for the entire HUC-8. Evaluation does not mean the actual development of new or updated flood risk products, only the assessment of what products would be required to fulfill the identified needs in light of the level of risk. Unmet needs must be cataloged in the Coordinated Needs Management Strategy Database (CNMS).

Once the entire HUC-8 has been evaluated, the Region will select the project tasks necessary to respond to the identified levels of risk and need. The Region is expected to maximize the amount and usefulness of project work to be performed in any HUC-8, but is not expected to perform every project task and meet all needs in every watershed. All scope with the HUC-8 boundary must be tasked/ordered at one time.