

## Western Estancia Watershed Discovery



# New Mexico's Risk MAP Program

September 4, 2024

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CTP Program Coordinator





# Western Estancia Watershed Discovery Meeting Protocol

- In person attendees please sign in
- Virtual attendees please put your name, title, community, and email address in the chat box.
- Please mute your line
- Type questions in the chat box
- Thank you for attending

# Agenda

- What is Risk MAP?
- Base Level Engineering
- Discovery
- Why is Discovery Important?
- Western Estancia Watershed history
- Data to be Collected from the Community
- Next Steps

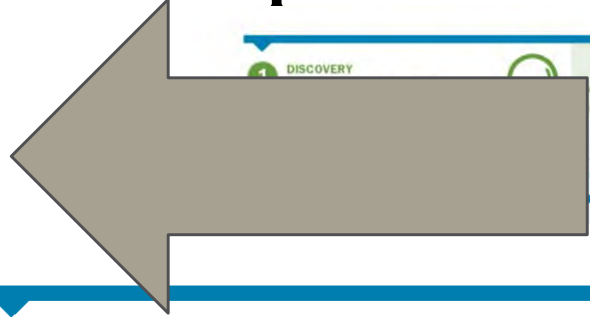
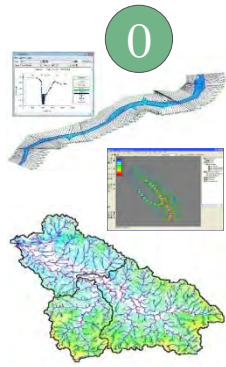


# What is Risk MAP?

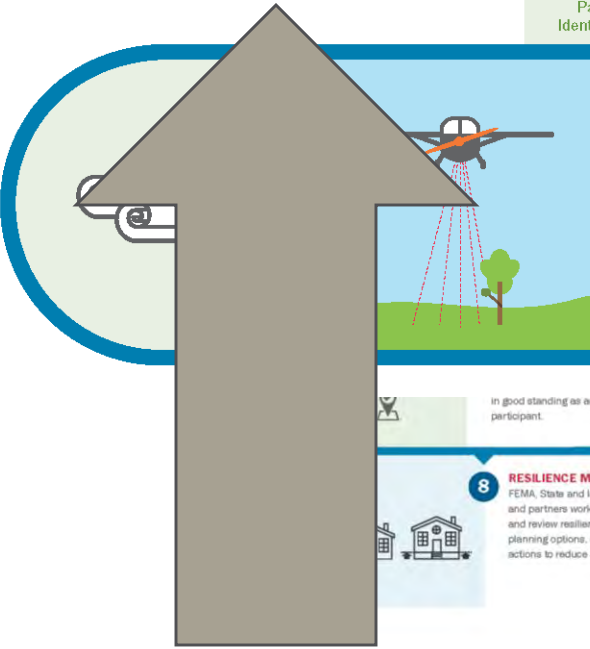
- Mapping – Identification of areas of natural hazard risk
- Assessment – Review and analysis of hazard areas
- Planning – Mitigation activities to reduce risk



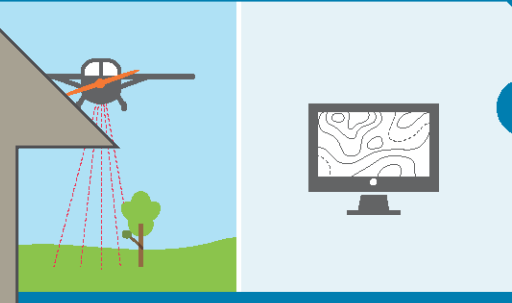
# Risk Map Process



**1 DISCOVERY**  
 FEMA gathers information about local flood hazards and their risk in close coordination with the community to prioritize future mapping, risk assessment, or mitigation planning assistance.



**2 ENGINEERING & MODELING**  
 FEMA analyzes the information gathered during Discovery and develops the first draft of the maps, called "work maps."

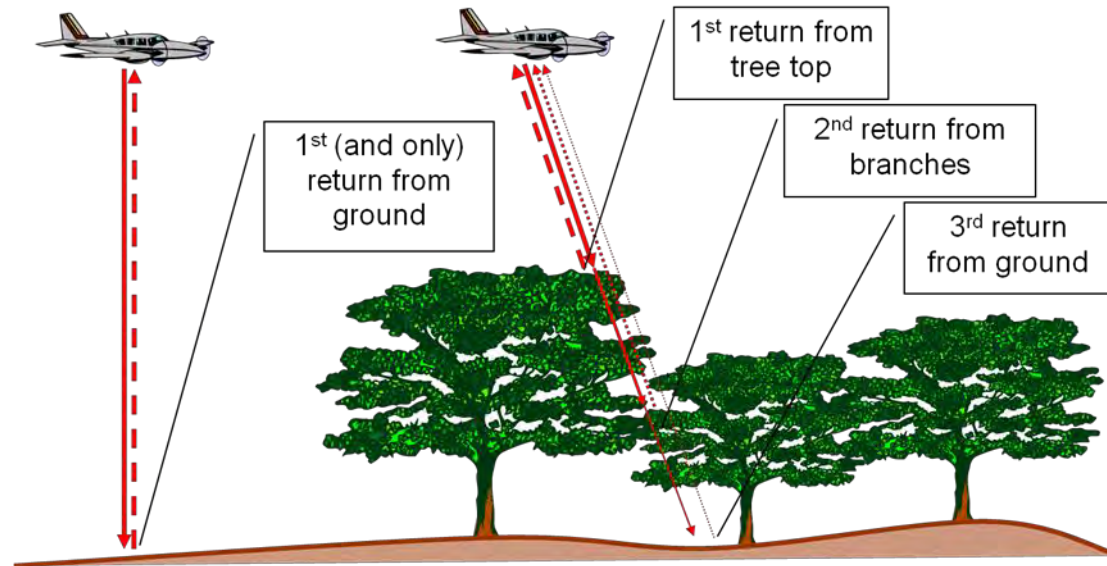


**8 RESILIENCE MEETING**  
 FEMA, State and local officials, and partners work to identify and review resilience strategies, planning options, and potential actions to reduce risk.

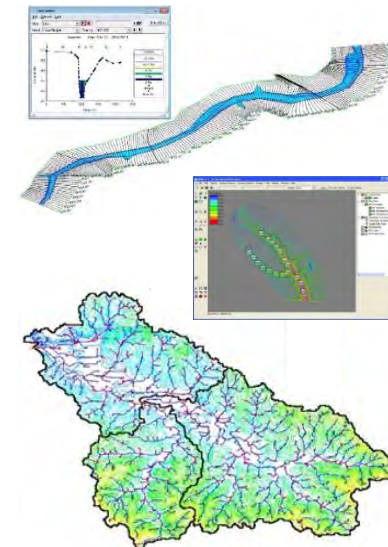
**9 EFFECTIVE MAPS**  
 Once effective, new maps and products are available through FEMA's Flood Map Service Center. The new data will inform flood insurance decisions and local building regulations. Community members can submit data to amend or revise the FIRM as part of a Letter of Map Change (LOMC) process.

# Base Level Engineering

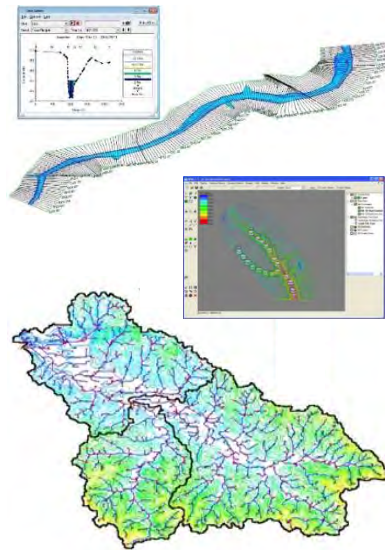
- 2014, 2017 & 2018 QL-2 Lidar collected



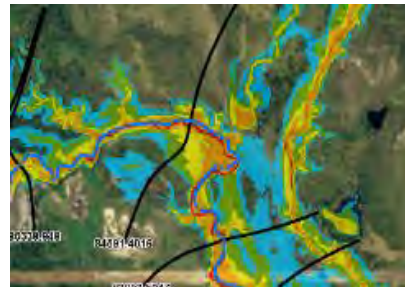
- 2021 Base Level Engineering



# Base Level Engineering provides:



Credible engineering analysis and modeling for local communities and developers.



Estimation of flood extents, water surface elevations and flood depths



Scalable and may be adopted as by communities & inform development decisions.

# Base Level Engineering



What is Base Level Engineering?

- Large scale engineering assessment resulting in engineering modeling and flood datasets.
- BLE is NOT a FIRM, but data/modeling produced can support future FIRM update.
- Provides data that may be used in coordination with available FIRM information to support local development decision making.
- When it closely matches the FIRM or is more restrictive, it can be adopted by communities to regulate land use development.



Why Base Level Engineering?

- FIRM updates require a lot of time, some have no data.
- Data to review current FEMA flood hazard inventory.
- Provides communities flood extents and model data to support community.





# Guidance for Flood Risk Analysis and Mapping

Base Level Engineering (BLE)  
Analysis and Mapping

November 2023



## Base Level Engineering is a Watershed Approach

- Allows use of updated flood risk information for unmapped areas or those that have paper maps.
- Delivers updated flood risk information in advance of new flood maps.
- Can be adopted any time for floodplain management.
- BLE can be used for creating digital flood maps where only paper ones or no maps existed before.

# Creating Base Level Engineering Data



## Terrain Data Collection

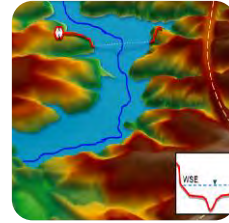
Is ground elevation  
Information readily-  
Available, or must it be  
Collected?



## Hydrology

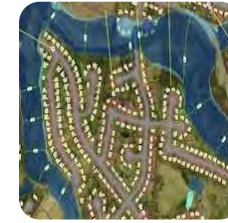
How much  
water are  
we talking  
about?

When will  
it get here?



## Hydraulics

How does it  
react in the  
stream?



## Floodplain Mapping

What areas  
are  
impacted?

# <https://webapps.usgs.gov/infrm/EstBFE/>

*Welcome to the*

Base Level Engineering assessments are produced using high resolution ground data to create technically credible flood hazard information that may be used to expand and modernize FEMA's current flood hazard inventory.

**1**

**I Want to Explore**

### View Base Level Engineering Data

Access all available Base Level Engineering data without GIS software.

- Click the **DATA LAYERS** button to add or remove map layers.
- Click the **LEGEND** tab to view an explanation of all data shown.
- Click the **MAP VIEW** button to open or close a second viewing window for side-by-side comparisons.

## Estimated Base Flood Elevation Viewer

**I Want to Download**

### Download Datasets & Models

Download the Base Level Engineering data presented in the viewer.

**2**

- Click the **DATA LAYERS** button and add the **DOWNLOADABLE DATA** layer.
- Click shaded areas in the map to open a dialog for choosing datasets to download.

**What Is My Flood Risk?**

### Property Look Up

Where data is available, produce a property-specific report with estimated base flood information.

**3**

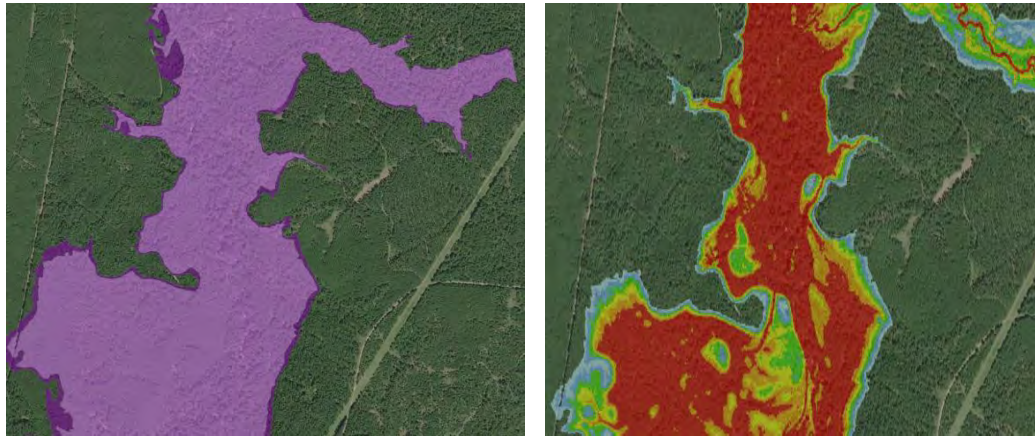
- Click the **REPORT** tab to create a flood risk report for a specific location.

**Click a topic to get started!**

# Base Level Engineering

## Products

- Hydraulic Engineering Models:  
10%, 4%, 2%, 1%, 1%+, 1%-, 0.2%
- Estimated Flood Extents: 10%, 1% and 0.2%
- Estimated Water Surface Grids: 1% and 0.2%
- Estimated Flood Depth Grids: 1% and 0.2%
- Additional Purchased (R6)
  - HAZUS – Level 2 Analysis



Free  
Download!

Download Data			
East Fork San Jacinto			
Data Set	File Name	Size	Download This Table
HECRAS models	12040103_Models.zip	156.00 B	Description Download
1% event depths, raster	12040103_Depth01.zip	96.30 MB	Description Download
2% event depths, raster	12040103_Depth002.zip	117.42 MB	Description Download
1% event elevations, raster	12040103_Elev01.zip	16.42 MB	Description Download
0.2% event elevations, raster	12040103_Elev002.zip	17.12 MB	Description Download
Vector spatial data, file geodatabase	12040103_VectorData.zip	40.02 MB	Description Download
Reports and documents	12040103_Documents.zip	2.57 MB	Description Download

# View the Base Level Engineering Data

1

**Estimated Base Flood Elevation (estBFE) Viewer**

Report Legend Data Layers

Estimated Flood Extent (1% and 0.2%)

Remove

High risk (1% flood zone)

Low to moderate risk (0.2% flood zone)

**Comments:** Properties within high risk areas have a 1 percent (1/100) chance of flooding in any year, while properties within low to moderate risk areas have a 0.2 percent (1/500) chance of flooding in any year.

Quick Start Glossary About

Scale: 1 : 9,244,649

U.S. Department of the Interior | DOI Inspector General | White House | E-gov | Open Government | No Fear Act | FOIA

<https://webapps.usgs.gov/infrm/EstBFE/>

# Download the Data

2

**Estimated Base Flood Elevation (estBFE) Viewer** FEMA

Report Legend 2 Data Layers

Downloadable Data (BLE) Remove

Base Level Engineering (BLE) study area with data available for download

Tip: Click areas to open a download dialog.

Base Map: Topographic

Comments: This base map includes administrative boundaries, cities, water features, physiographic features, parks, landmarks, highways, roads, railways, and airports.

Data Source: ESRI ArcGIS Online

Quick Start Glossary About

Scale: 1:9,244,649 Lat: 28.0877 Lon: -104.6397

U.S. Department of the Interior | DOI Inspector General | White House | E-gov | Open Government | No Fear Act | FOIA

<https://webapps.usgs.gov/infrm/EstBFE/>

# Download the Data



Download Data

San Marcos

Data Set	File Name	Size	Download this table
HECRAS models	12100203_Models.zip	57.32 MB	Description Download
1% event depths, raster	12100203_Depth01.zip	56.12 MB	Description Download
0.2% event depths, raster	12100203_Depth002.zip	66.42 MB	Description Download
1% event elevations, raster	12100203_Elev01.zip	18.68 MB	Description Download
0.2% event elevations, raster	12100203_Elev002.zip	20.15 MB	Description Download
Vector spatial data, file geodatabase	12100203_VectorData.zip	46.18 MB	Description Download
Reports and documents	12100203_Documents.zip	2.60 MB	Description Download

Close

<https://webapps.usgs.gov/infrm/EstBFE/>

# Site-Specific Report

3

**Estimated Base Flood Elevation (estBFE) Viewer**

FEMA

Report Legend

Create a Flood Risk Report

More info

Search for a place

Enter an address or place of interest in the above search box. A popup will appear at the chosen location and you can create a report if BLE data are available there.

OR

My Location

Click this button to zoom the map to your saved locations. A popup will appear and you can create a report if BLE data are available there.

Tip: Your web browser must support and have geolocation enabled.

OR

Map Click

Zoom into your area of interest. Click the button and then the map. A popup will appear and you can create a report if BLE data are available there.

Tip: Click on the center of the roof of your home or the most upstream point of your structure.

Map Click Location

**High Flood Risk**

This location is in a 1% (100 year) flood zone.

Report Zoom To Close

Scale: 1:2,257 Lat: 29.9141 Long: -97.4425

U.S. Department of the Interior | DOI Inspector General | White House | E.gov | Open Government | No Fear Act | FOIA

<https://webapps.usgs.gov/infrm/estBFE/>



# Report Features

5/23/2018 FEMA's Estimated Base Flood Elevation (BFE) Report

## Estimated Base Flood Elevation (estBFE)

Flood Risk Information Report

FEMA is providing a look at flood data availability and relative Base Level Engineering analysis through the Estimated Base Flood Elevation Viewer (Estimated BFE Viewer). Base Level Engineering uses high resolution ground elevation data, flood flow calculations, and fundamental engineering modeling techniques to define flood extents for streams. The viewer is an effective tool for property owners, community officials, and land developers to identify flood risk, estimated flood elevations, and flood depths for watersheds where Base Level Engineering has been prepared.

Gonzales County, Texas Latitude 29.5200 Longitude -97.2407

Flood Event	Estimated Flood Depth*	Estimated Base Flood Elevation*
1 Percent (100 Year)	3.7 feet above land surface	288.9 feet NAVD 1988
0.2 Percent (500 Year)	6.4 feet above land surface	291.6 feet NAVD 1988

\* The information included in this report is based on the location marker shown in the map. Results are not considered as official determinations.

Information made available from the Estimated BFE Viewer needs to be accepted by local community officials to be used for insurance rating purposes.

### Knowing Your Risk

Base Level Engineering data availability and analysis information is important because it can be used to:

- Identify floodplain improvements, design and ordinance amendments.
- Identify significant floodplain changes.
- Screen sites for zoning and map amendments.
- Support the Zone A-BFE Interpretation for a Letter of Map Amendment (LOMA) request.

Graphic is not to scale.

<https://webapps.usgs.gov/inform/estBFE/report.html?lat=29.5200272684574&lng=-97.24067687888283>

1% and 0.2% Estimated Flood Depths & Estimated BFE values

1% and 0.2% Estimated Flood Depths values

LOW to MODERATE Flood Risk

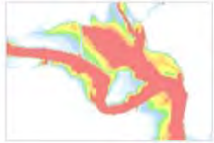
1.2 ft Estimated 0.2% Flood Depth

N/A Estimated 1% Flood Depth

Graphic is not to scale.

Report Legend 4

### Flood Depth (1%)



- ≤ 1 foot
- > 1 to 2 feet
- > 2 to 3 feet
- > 3 to 4 feet
- > 4 to 5 feet
- > 5 feet

**Comments:** Depicts estimated water depths above land surface during a 1% annual chance storm event (a storm that has a 1/100 chance of occurring in any calendar year). [Glossary of terms...](#)

### Study Areas



Base Level Engineering (BLE) study area boundary

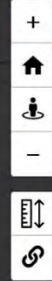
### FEMA Region 6

Glossary

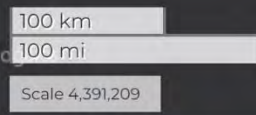
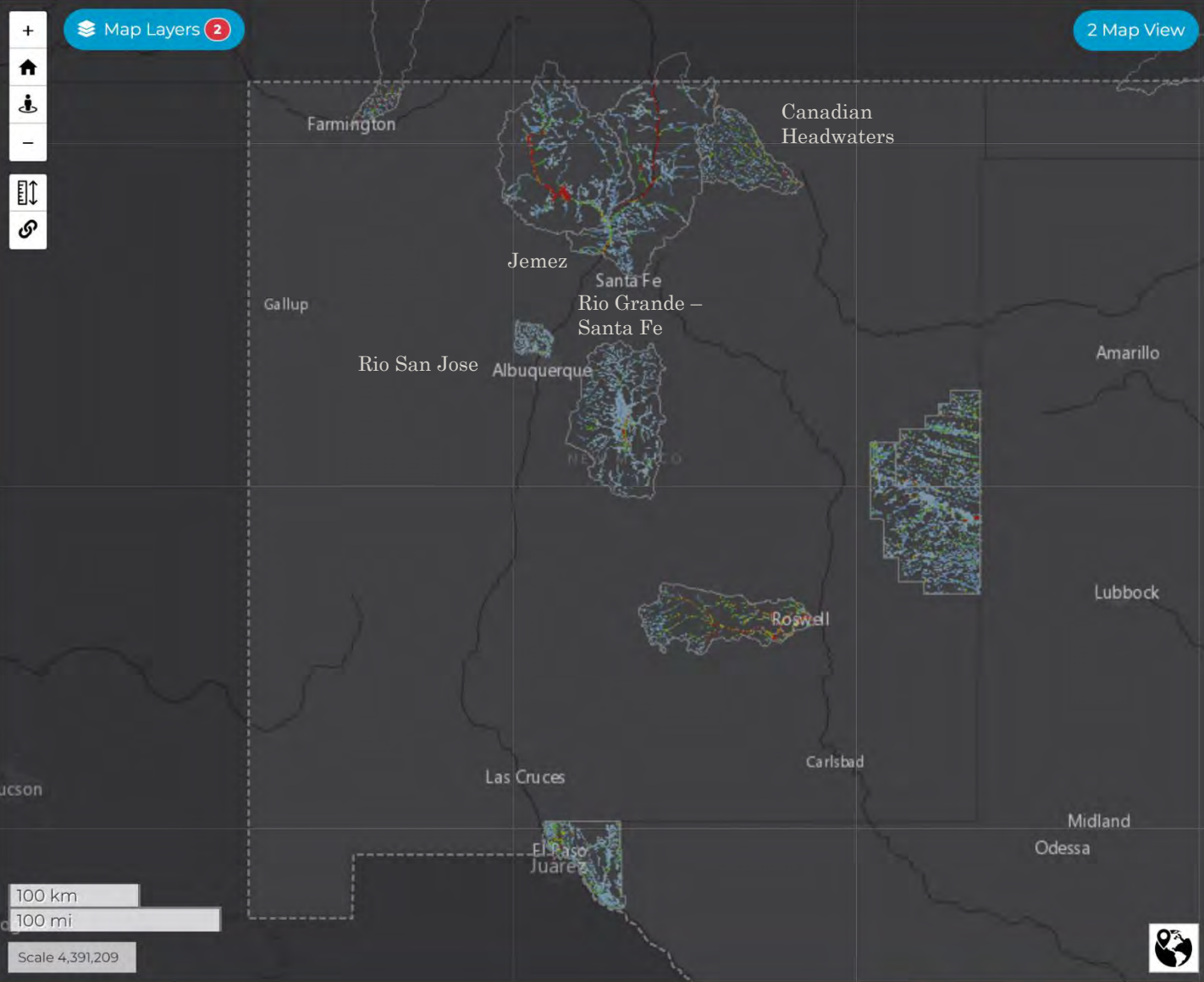
Quick Start

- Notifications
- Hover tips
- [About](#)

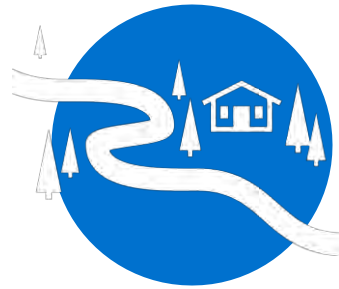
Map Layers 2



2 Map View



# How Can We Use BLE?



**Community Planning,  
Land Use and Zoning**



**Hazard Mitigation  
Planning and Grants**



**Building  
Sciences**



**Letter of Map  
Change – Zone A**



**Floodplain Management,  
Development Review  
and Permitting**



**Emergency  
Management**



**Outreach and  
Engagement**



**???**



# www.fema.gov/about/organization/region-6/base-level-engineering-ble-tools-and-resources

## BASE LEVEL ENGINEERING

Flood data to expand local risk awareness

### THE ESTIMATED BASE FLOOD ELEVATION VIEWER

When to use Base Level Engineering

Zone A Floodplains and Base Level Engineering. More than half of base level coverage on Flood Insurance Rate Maps (FIRMs) nationwide is in Zone A, including areas that are generally flood prone during major events with a return period of 100 years and exceeding a protection level Flood Elevation (FE) of 10 feet above the base of finished ground.

FEMA's mission is to reduce risk and support recovery from disasters.

- Communicate your flood knowledge and prevent flood events in residential communities by providing flood maps.
- All Base Level Engineering projects are subject to a public notice and comment process.
- Base Level Engineering is identified as a development greater than 10,000 sq ft.
- Assess if flooding will be "excessive" based on flooding.
- When BLE is used, FEMA will not review your project for flood protection or return period. The base level coverage on the FIRM is a final and official determination of flood risk. However, FEMA will review your project for flood protection or return period if you are not using BLE.

Implementing Local Use of Base Level Engineering.

- Local jurisdictions can use BLE to provide flood protection or return period information to the public.
- BLE coverage is larger than Zone A areas shown on FIRM.
- Local jurisdictions can use BLE to provide flood protection or return period information to the public.

## HOW2 Use BLE Data for Local Permitting

The BAC User Manual

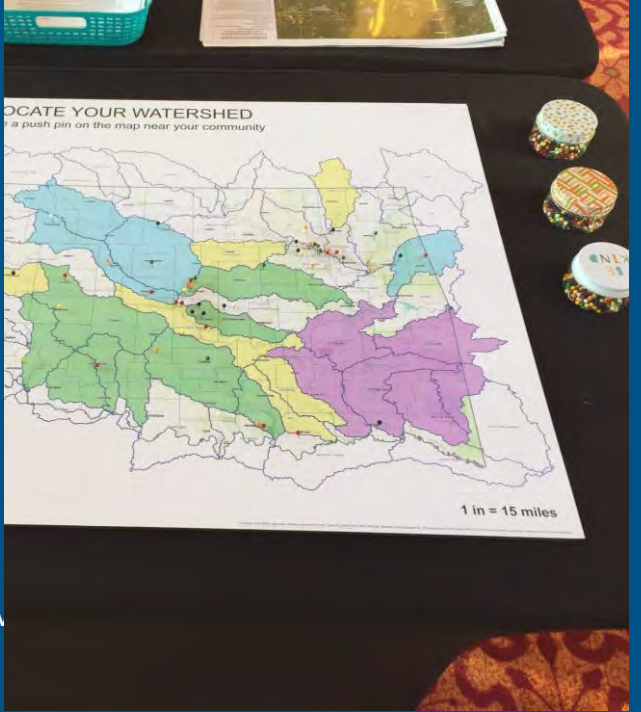
Use the BAC User Manual to determine if you are eligible to use BLE for your project. The manual provides information on how to use BLE for your project and how to use BLE for your project.

1. Determine if you are eligible to use BLE for your project. The manual provides information on how to use BLE for your project and how to use BLE for your project.

2. Determine if you are eligible to use BLE for your project. The manual provides information on how to use BLE for your project and how to use BLE for your project.

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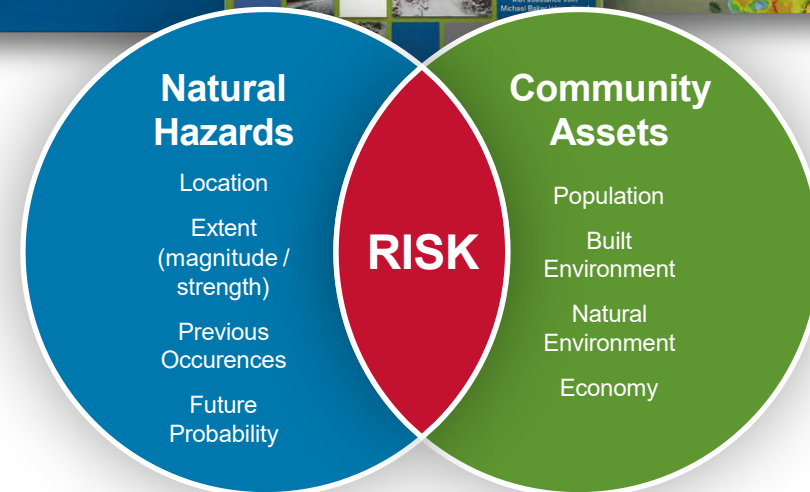
4. Determine if you are eligible to use BLE for your project. The manual provides information on how to use BLE for your project and how to use BLE for your project.



# Hazard Mitigation Planning

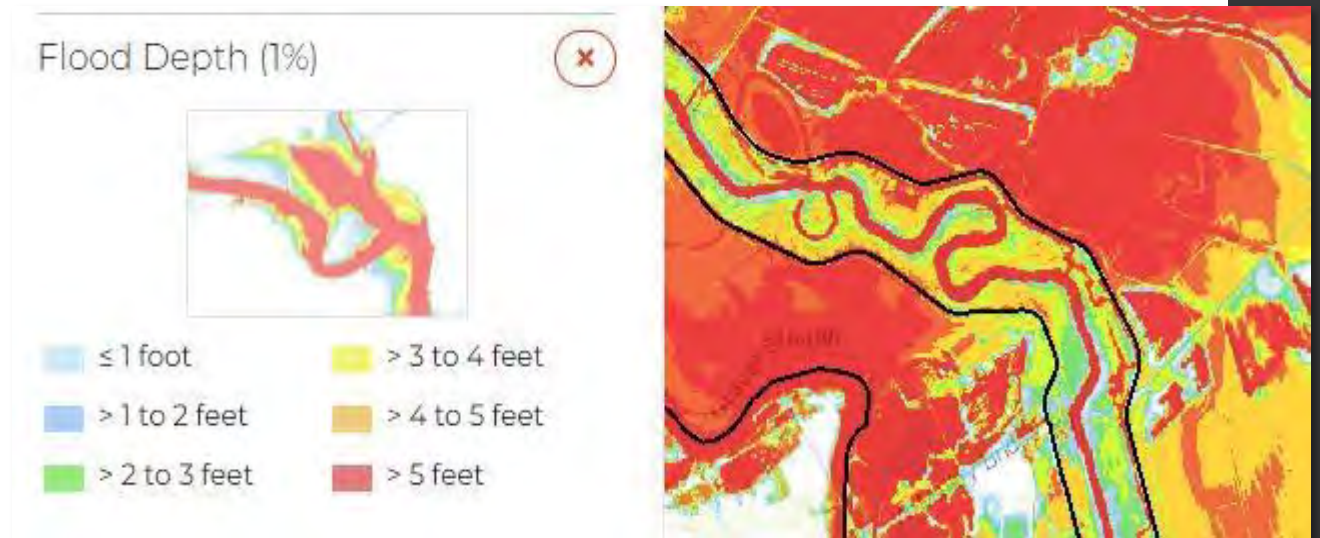
## Hazard Mitigation Plans:

- Five-year update cycle
- Affects federal aid eligibility
- Requires hazard data...BLE!



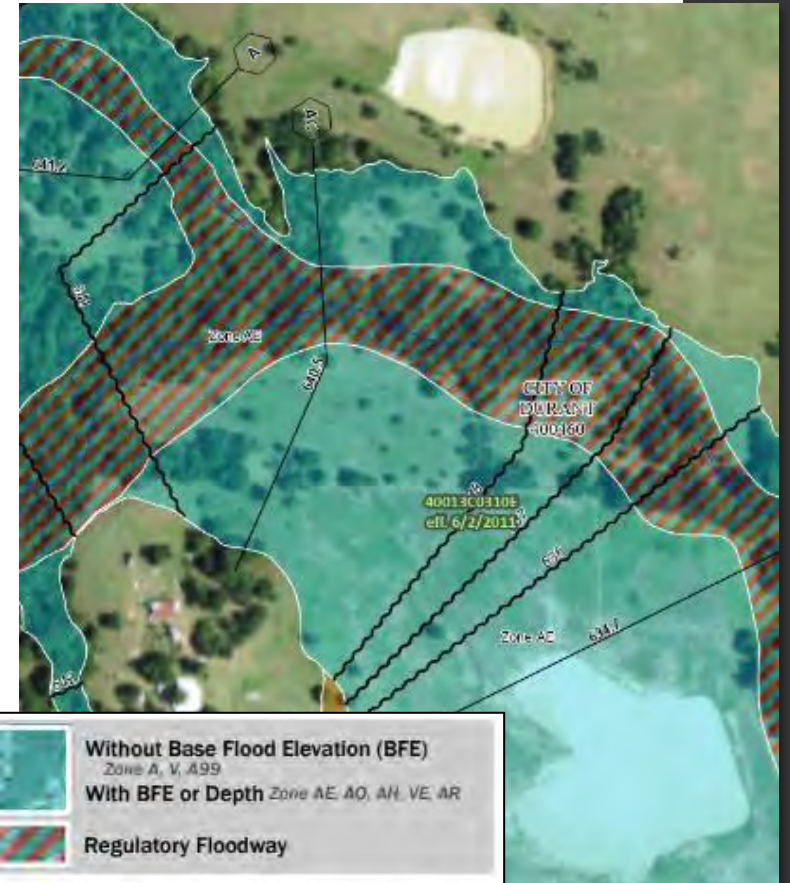
# Risk Assessment: Extent

- Extent is the range of anticipated
  - intensities of the identified hazard.
- Measure of a hazard event's strength:
  - Value on an established scientific scale or measurement system.
  - Other measures of magnitude, such as water depth or wind speed.
  - Scales must also include narratives that
    - relate to the planning area.
- Check your state HMP for details.



# Risk Assessment: Probability of Future Flood Events\*

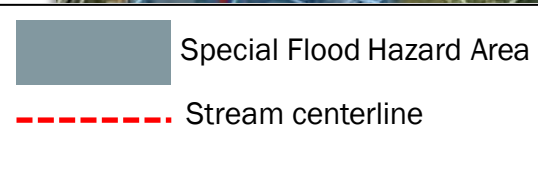
- When looking at vulnerability, consider how
  - often hazards occur.
    - 10%, 1%, or 0.2% Annual Chance?
    - Each chance has different risk to the area.
- Prepare for future changes in the area.
  - Population change, land development, relocation.
  - What has stayed the same?
- Consider secondary hazards.



SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X

# Risk Assessment: Vulnerability

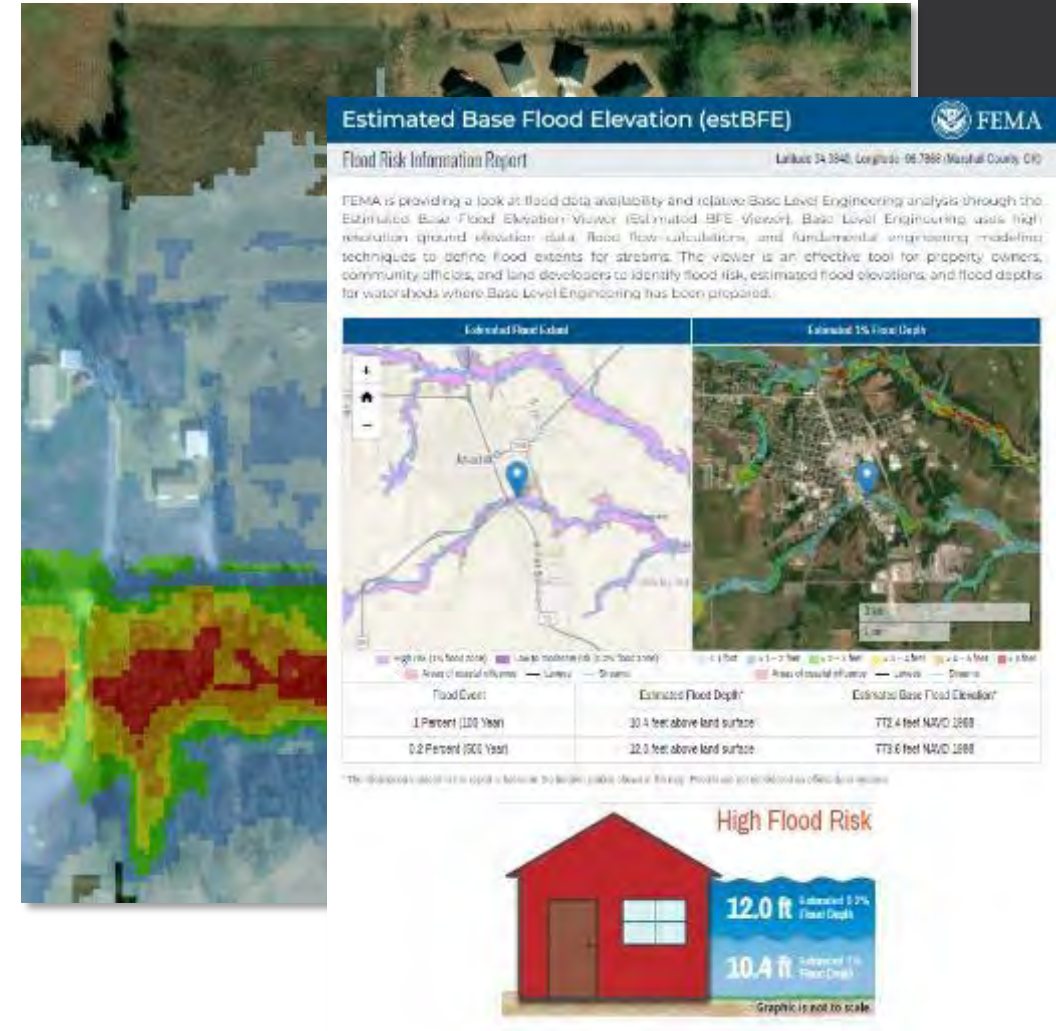
- A description of which assets are at risk from the effects of the identified hazard(s).
  - Includes structures, systems, populations and other assets as defined by the community
- Needs a summary of vulnerabilities of all participating jurisdictions.
  - Include current and future assets.
  - What makes the people and risk susceptible to damage?
  - Have a problem statement of the hazard and its effects.
- BLE data can assist in a manual assessment, though that does not meet the entirety of the requirement.





# Risk Assessment: Impact

- Impacts are the consequences during
  - hazard events.
    - Lives lost.
    - Injuries.
    - Property damage.
- The risk assessment describes potential
  - impacts for current and future conditions.
    - Climate change, population shift, change in
      - land use.



# Emergency Management

## Disaster Preparedness and Planning Activities

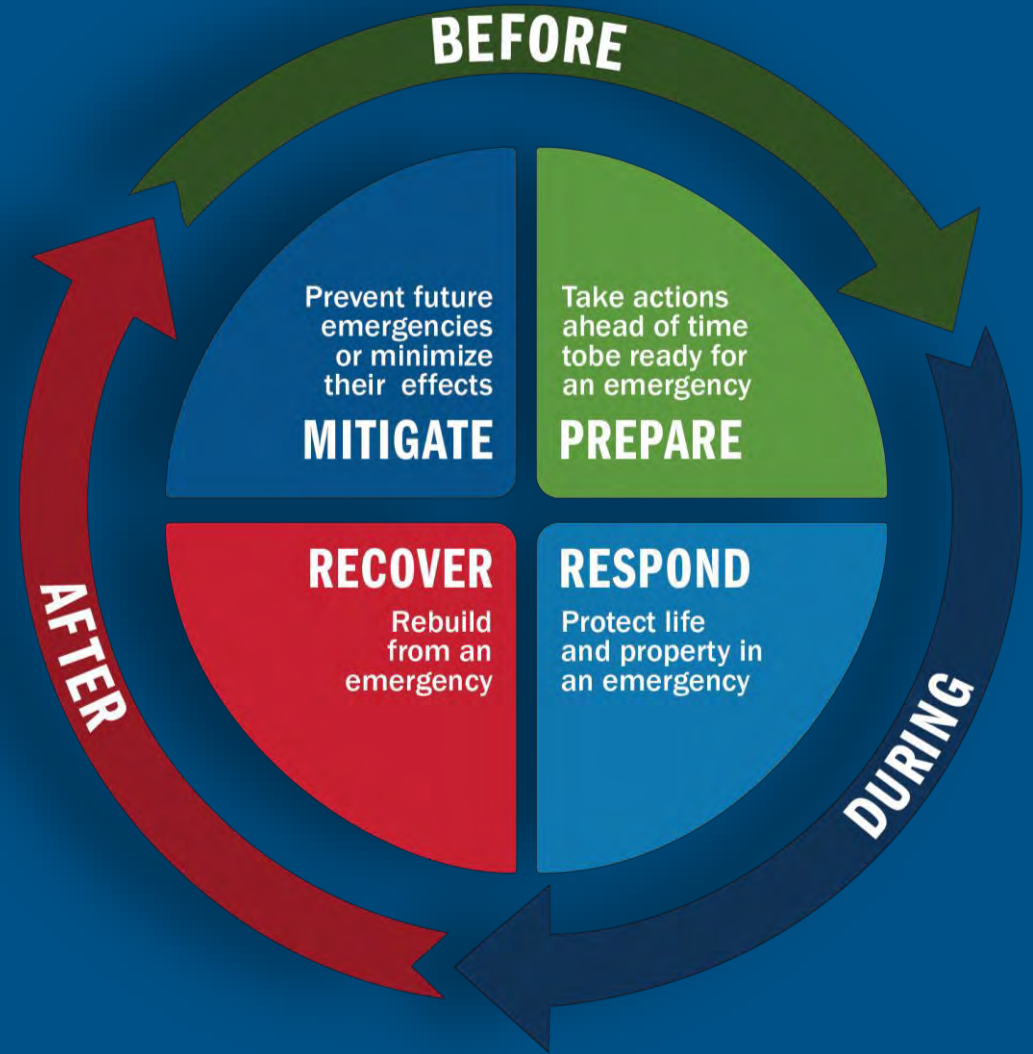
- Identifying and planning evacuation routes
- Evacuation shelter planning
- Flood warning systems
- Reverse-911 systems
- Social vulnerability assessments

## Disaster Response Activities

- First responder route-finding and access
- Shelter monitoring

## Disaster Recovery Activities

- Flood event/high water mark comparisons
- Infrastructure repair and rebuilding
- BFEs for repairs and re-construction



**FEMA**

# Letters of Map Change

- Communities can use BLEs for Letter of Map Amendment (LOMA) submittals.
- Use where there are no data.
- Use where data are more conservative or similar to existing data (Zone A).

## How to Request a Letter of Map Amendment (LOMA) or Letter of Map Revision Based on Fill (LOMR-F)

### What is a LOMA or a LOMR-F?

- The Federal Emergency Management Agency (FEMA) applies rigorous standards to develop Flood Insurance Rate Maps (FIRMs) and uses the most accurate hazard information available. However, limitations in the scale or detail of the source maps used to prepare a FIRM may cause small elevated areas to be included in a Special Flood Hazard Area (SFHA). SFHAs are high-risk areas subject to inundation by the base (1%-annual-chance) flood. They are also known as 1%-annual-chance floodplains, base floodplains or 100-year floodplains.

- FEMA provides two ways to challenge the flood hazard designation for properties in these areas. The LOMA process is for properties on naturally high ground, and the LOMR-F process is for properties elevated by fill. LOMAs and LOMR-Fs can officially amend an effective FIRM. They can establish that a property is not in an SFHA. By doing so, they remove the federal flood insurance requirement.

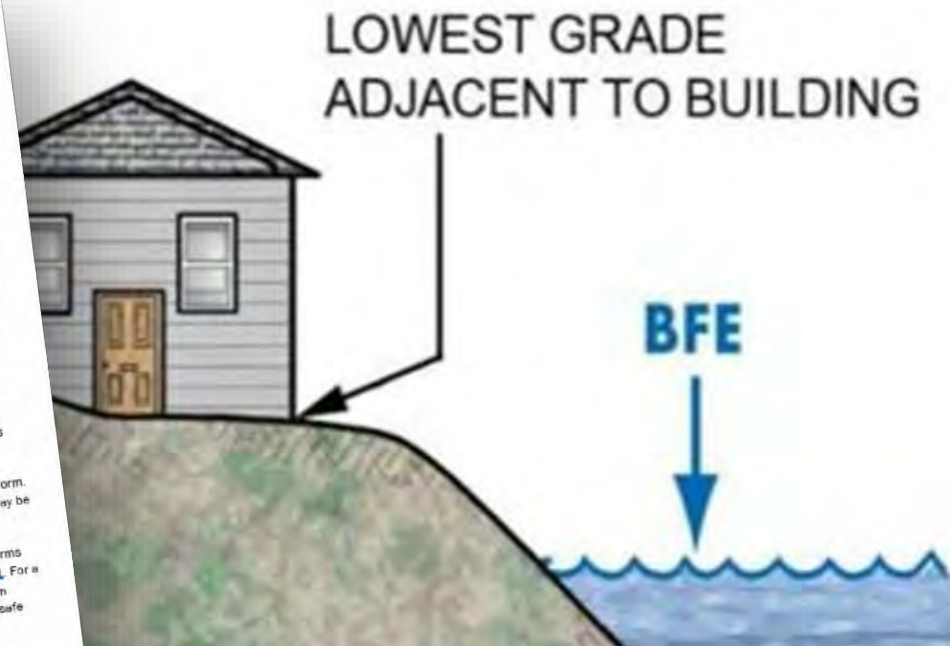
### Obtaining a LOMA or LOMR-F

- The LOMA application form is on the FEMA website at <https://www.fema.gov/flood-maps/change-your-food-zone/paper-application-forms>. FEMA does not charge a fee to review a LOMA request, but requesters must provide specific mapping and survey information for their property. For FEMA to remove a structure from the SFHA through the LOMA process, the lowest ground touching the structure, or Lowest Adjacent Grade (LAG), must be at or above the Base Flood Elevation (BFE).
- If the property information shows that the structure is outside the SFHA, the property is referred to as "out as shown." No elevation data is needed in this case.
- If elevation information is required, the requester should submit the data requested on the MT-EZ or MT-1 form. Requesters may instead opt to submit an Elevation Certificate that includes the LAG elevation data. One may be available from the community.
- If the property has been elevated by fill, the requester will need to use the LOMR-F process. Application forms are available at <https://www.fema.gov/flood-maps/change-your-food-zone/paper-application-forms/mt-1>. For a LOMR-F to remove the SFHA designation, the LAG must be at or above the BFE, and community floodplain officials must determine that the land and any structures to be removed from the SFHA are "reasonably safe"



FEMA

January 2022 1



## Risk MAP Discovery

### The Goal

To work closely with communities to better understand local flood risk, mitigation efforts, and other topics and spark watershed-wide discussions about increasing resilience to flooding. The Discovery process of FEMA's Risk MAP program helps communities identify areas at risk for flooding and solutions for reducing that risk.

# Discovery

Next Step



## Risk MAP Discovery

Capturing a More Complete Picture  
of Your Watershed

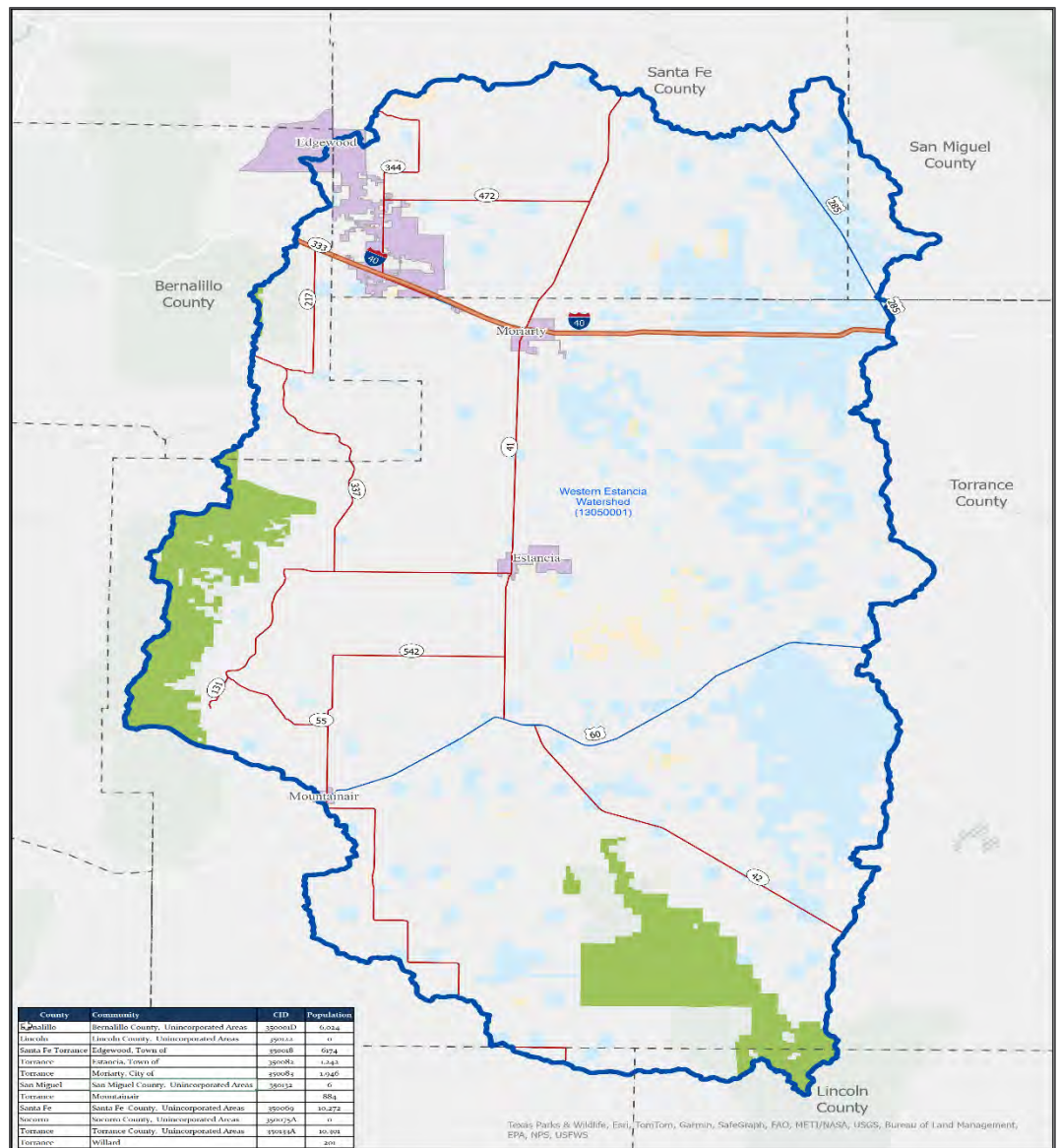
# Discovery

- Holistic view of a geographic area; watersheds cross jurisdictional borders – Ownership of Risk
- Develop partnerships, combine resources, share flood risk information, develop a vision for the watershed – Whole Community
- Identifying and empowering communities to take action to reduce their flood risk - Resiliency

# Why is Discovery Important?

- Provide flood risk information
- Know your risk
- Review Mitigation Plans
- Discuss mitigation opportunities





# Western Estancia Watershed

County	Community	CID	Population
Bernalillo	Bernalillo County, Unincorporated Areas	350001D	6,024
Lincoln	Lincoln County, Unincorporated Areas	35012A	0
Santa Fe/Torrance	Edgewood, Town of	35004B	674
Torrance	Torrance, Town of	35008A	1,243
Estancia	Moriarty, City of	450084	1,046
San Miguel	San Miguel County, Unincorporated Areas	35013A	6
Torrance	Mountainair	35013A	884
Santa Fe	Santa Fe County, Unincorporated Areas	35009A	10,272
Socorro	Socorro County, Unincorporated Areas	350175A	0
Torrance	Torrance County, Unincorporated Areas	35014A	10,101
Torrance	Willard	35014A	20

Todd's Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, FAO, METI/MASA, USGS, Bureau of Land Management, EPA, NPS, USFWS

### Legend

- Roads
  - State Highway
  - US Highway
  - Interstate
- Watershed Boundary: HUC8
- County Boundary
- Community
- Surface Land Ownership
  - Bureau of Land Management
  - USFS
  - State

### Discovery Map

WESTERN ESTANCIA WATERSHED, NEW MEXICO  
HUC 13050001 *This Exhibit is for Illustrative Purposes Only*

June 2024

### Project Location

# History and Local Issues

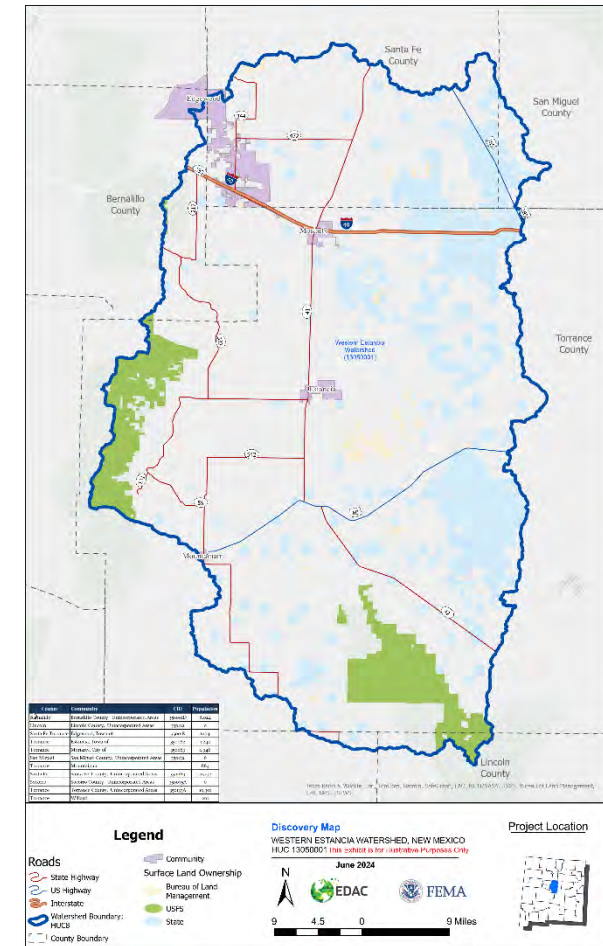
## Western Estancia Watershed

- 2,423 square miles
- 35 LOMA

## NFIP Communities

- Bernalillo County
- Lincoln County
- Town of Edgewood
- City of Moriarty
- San Miguel County
- Santa Fe County
- Socorro County
- Torrance County
- Village of Willard

- Historical Floods in Western Estancia Watershed?
- Flood Zones - Paper Maps





# FIRM Status

- Torrance County - Paper maps, no digital data
- EDAC Digitized the maps and created a Web app viewer



**INTERACTIVE MAPS**

Statewide Mapping Status:

- FEMA Mapping Project Status for New Mexico
- Risk MFP Project Status for New Mexico
- Lidar Status for New Mexico

Statewide Flood Data (Data is only available for counties with OFIRM):

- FEMA's National Flood Hazard Layer (NFHL)

Cooperating Technical Partner Web Mapping Sites (mapping sites built directly with Chrome or ArcGIS):

- Carson County
- De Baca County
- Guadalupe County
- Hidalgo County
- Los Alamos County
- Mora County
- Quay County
- Sierra County
- Torrance County
- Union County

NM Wildfire Risk Assessment Portal:

- NWRMAP

**NM RISK MAP PROJECTS**

New Mexico Brand Projects:

- Animas Watershed
- Cimarron Watershed
- Rio Grande Watershed
- Upper Rio Grande Watershed
- Western Escamola Watershed
- Curry and Kinnebrew Counties

New Mexico Multi-Hazard Risk Portfolio (MHRP):

- Risk Portfolio Landslide Risk
- Risk Portfolio Wildfire Risk
- Risk Portfolio Flood Risk
- Watershed Aggregated Data, Interactive Map
- MHRP Reference Interactive Map

Statewide Projects:

- Stream Gauge Analysis
- Alluvial Fan and Debris Flow Report
- Automated Landslide Hazard Detection
- New Mexico Zone D Report

**MAP REPOSITORY**  
Town Hall, 1001 Highland Avenue, Estancia, New Mexico 87016 (Maps available for reference only, not distribution).

**INITIAL IDENTIFICATION:**  
JUNE 14, 1974

**FLOOD HAZARD BOUNDARY MAP REVISIONS:**  
DECEMBER 12, 1975

**FLOOD INSURANCE RATE MAP EFFECTIVE:**  
JULY 16, 1990

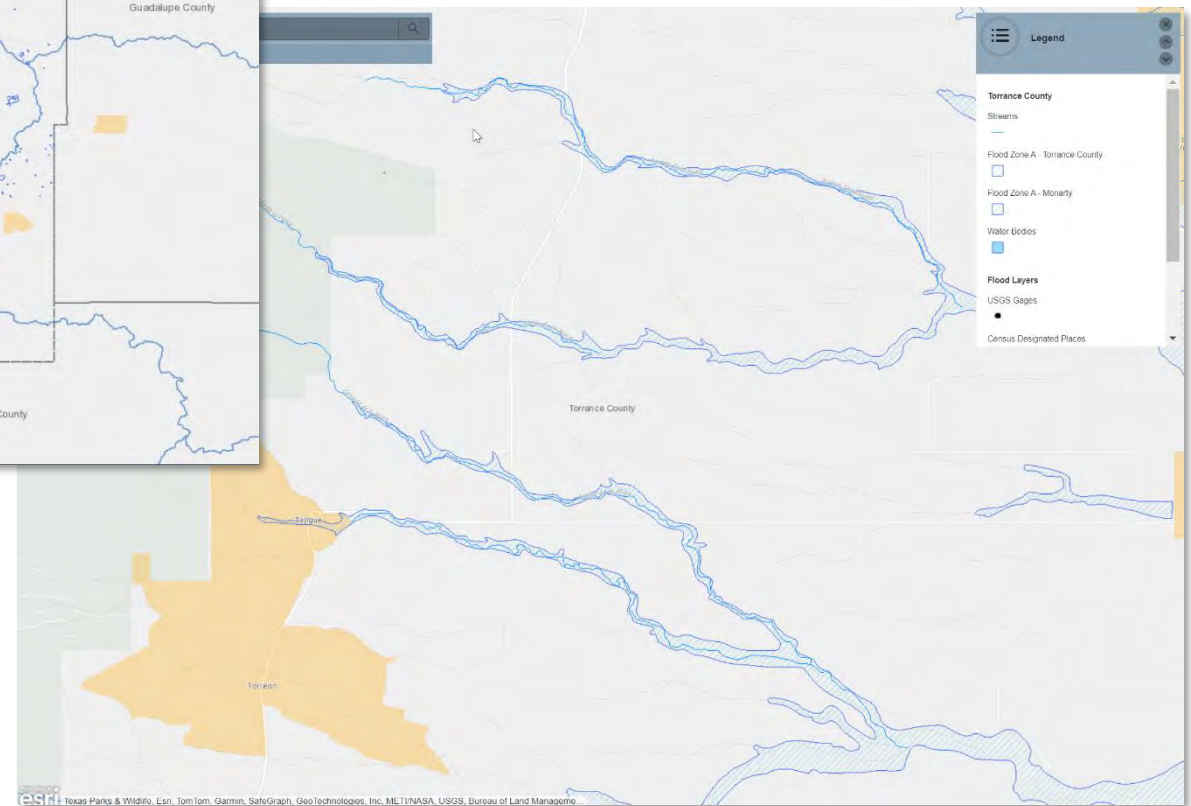
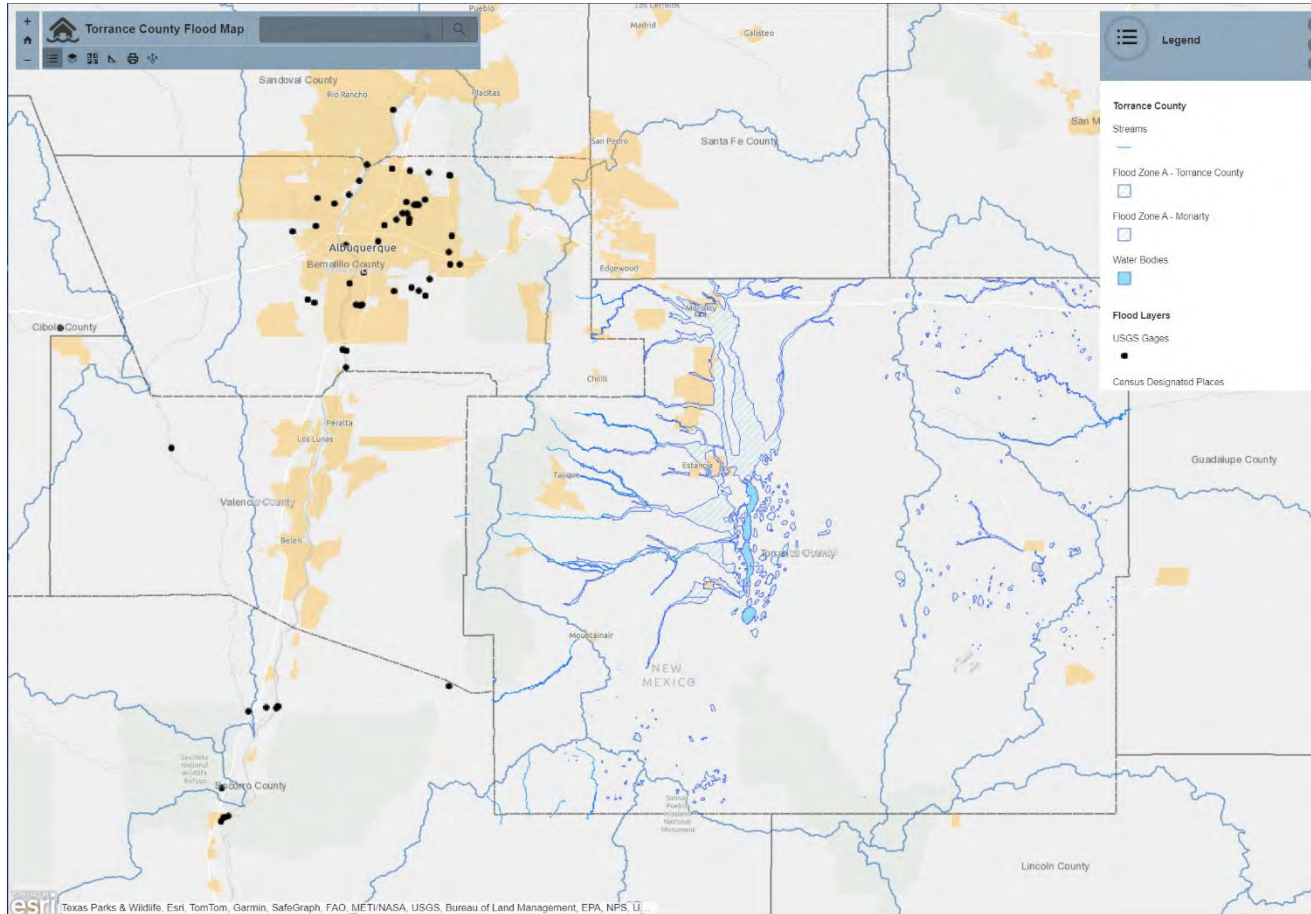
**FLOOD INSURANCE RATE MAP REVISIONS:**

**EFFECTIVE DATE:**  
APRIL 11, 1978

**CONVERTED BY LETTER**  
EFFECTIVE 10/1/2007

**COMMUNITY - PANEL NO.**  
350133 0018 A

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



<https://edac.maps.arcgis.com/apps/View/index.html?appid=224e2f56d7f345df97e9d444053f5f84>

# Participants in Discovery

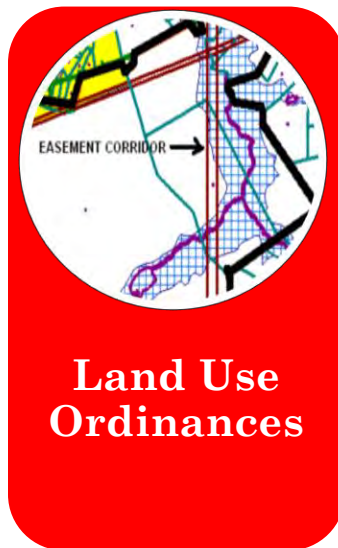
- New Mexico Floodplain Coordinator
- State Hazard Mitigation Officer
- FEMA Region 6
- Shawn L. Penman, NM CTP Coordinator
- Local elected officials
- Regional authorities
- Local floodplain administrators
- Local emergency management officials
- Local watershed groups

# What Kind of Information?

- Areas of repeated flooding
- Future development plans
- Areas of low water crossings
- High water marks from recent floods
- Flood risk concerns
- Areas of Mitigation Interest
- Master drainage plans, flood risk reduction projects and large areas of fill placement
- Local Hazard Mitigation Plans
- Other flood risk information

# What Mitigation Actions will you take?

- Mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property
  - What are some areas of mitigation interest in your community?



# Discovery Resources



Collection

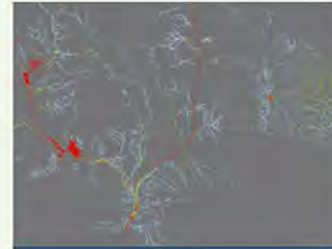
## Western Estancia Watershed Discovery

The goal of Discovery is to gain a holistic picture of the flood hazards within watershed, collect data to validate the flood risks, identify opportunities to facilitate mitigation planning, and identify actions to reduce flood risk in watershed.

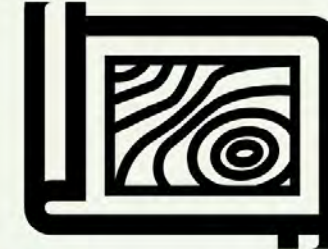
Get started



1 Discovery Process



2 Base Level Engineering



3 Hazards Data Collection



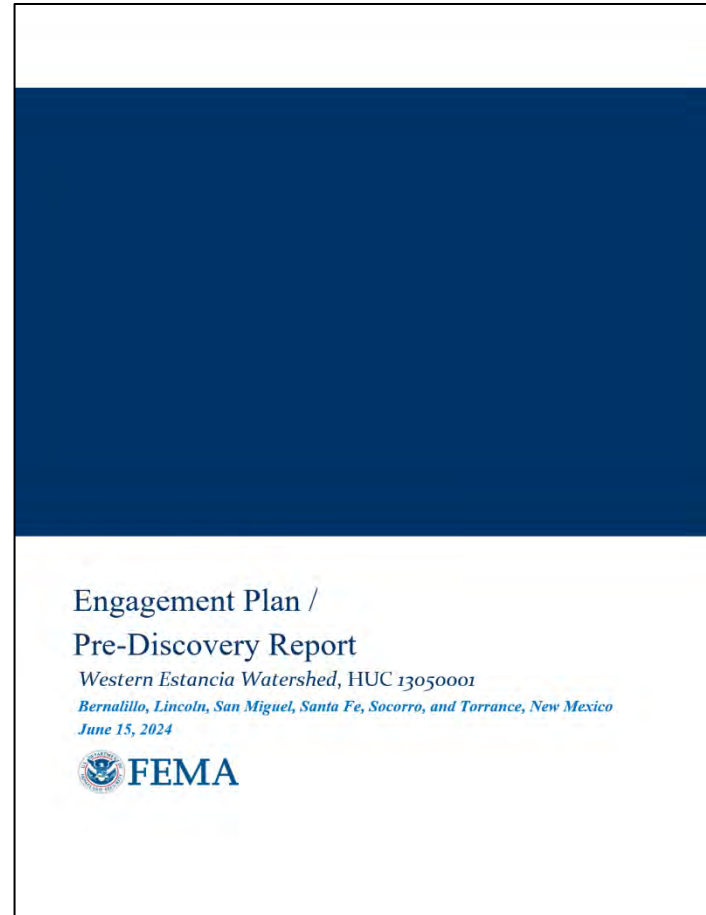
4 Hazard Mitigation



5 Flood Insurance

<https://arcg.is/1Crzj9>

# Pre-Discovery Report



[https://edac.unm.edu/projects/nmflood/Western\\_Estancia\\_PreDiscovery\\_Report.pdf](https://edac.unm.edu/projects/nmflood/Western_Estancia_PreDiscovery_Report.pdf)

# Next Steps

- Discovery Findings Meeting September 18, 2024 (Virtual)
  - Report on information gathered
  - Mitigation activities
- Information gathered will help the communities make better informed decisions to address the flood hazard risks that are identified
- FEMA and the CTP will determine the path forward and scope for the study based on data and discussions with community



# NMFLOOD.org

Home | About | Projects and Maps | Flood Related Info | News | Contact

## NMFLOOD.ORG

A collaborative resource to promote New Mexico flood risk awareness and resiliency

### Watershed Projects

Discovery Project Areas

- Western Estancia Watershed
- Rio Chama Watershed
- Upper Rio Grande Watershed
- Valencia County
- Curry and Roosevelt Counties

Base Level Engineering Project Areas

- Animas Watershed
- Cimarron Watershed
- Rio Hondo Watershed
- Upper Rio Grande Watershed
- Curry & Roosevelt Counties
- Rio Chama Watershed
- Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA)
- Western Estancia Watershed

### Special Projects

Lidar Building Footprint Toolbox

The LIDAR Building Extraction Toolbox for LIDAR LAS 1.4 files works with ESRI ArcGIS version 10.4, 10.5 and ArcGIS Pro.

- LIDAR Building Footprint Extraction Tool User Guide
- LIDAR Building Footprint Extraction Tool Video Playlist
- LIDAR Building Footprint Tool Download

### Statewide Projects

New Mexico Debris Flow Story Map & Resources

New Mexico Multi-Hazard Risk Portfolio

- Risk Portfolio Landslide Risk
- Risk Portfolio Wildfire Risk
- Risk Portfolio Flood Risk

Other Statewide Projects

- Stream Gage Analysis
- Alluvial Fan and Debris Flow Report
- Automated Landslide Hazard Detection
- New Mexico Zone D Report

### Interactive Maps

Statewide flood data

- FEMA's National Flood Hazard Layer (NFHL)

Region VI Viewers

- Estimated Base Flood Elevation (estBFE) Viewer

CTP Interactive Maps

- Lidar Status for New Mexico

### Story Maps

- Impacts of September 2013 Flooding in New Mexico
- Turn Around Don't Drown New Mexico

# Questions?



Western Estancia Watershed  
Discovery Meeting  
September 4, 2024

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CTP Program Coordinator  
[spenman@edac.unm.edu](mailto:spenman@edac.unm.edu)  
(505) 277-3622, x227

View of Mountainair from the north, New Mexico, 1909. Courtesy of the Palace of the Governors Photo Archives (NMHM/DCA),  
Negative No. HP.2014.02.1.