

# Roosevelt County, NM

## BASE LEVEL ENGINEERING FACT SHEET



RiskMAP  
Increasing Resilience Together

### PROJECT TEAM:

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**BACKGROUND:** Roosevelt County covers approximately 2,454 square miles. Roosevelt County has been in fire related federal disaster declarations 2 times and has been affected by 24 flooding events and 19 wildfires between 2000 and 2010.

FEMA and the New Mexico Cooperating Technical Partner, the Earth Data Analysis Center (EDAC), initiated a Risk Map project in 2017, following Lidar data collection in 2015, the Base Level Engineering Study was started in 2017. The Lidar was collected based on the county boundaries and the BLE analysis will be conducted by watershed within the county.

### Purpose

Base Level Engineering is a collaborative process that produces quality data that can be used to increase public awareness and lead to flood risk reduction.

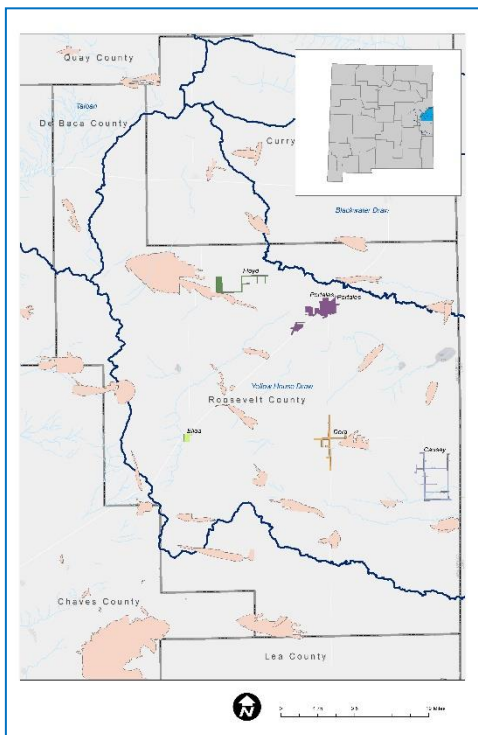
Expand the national flood hazard data inventory and expedite flood data delivery to communities and create a framework for risk and scenario based analyses.

### Minimum Data Purchase

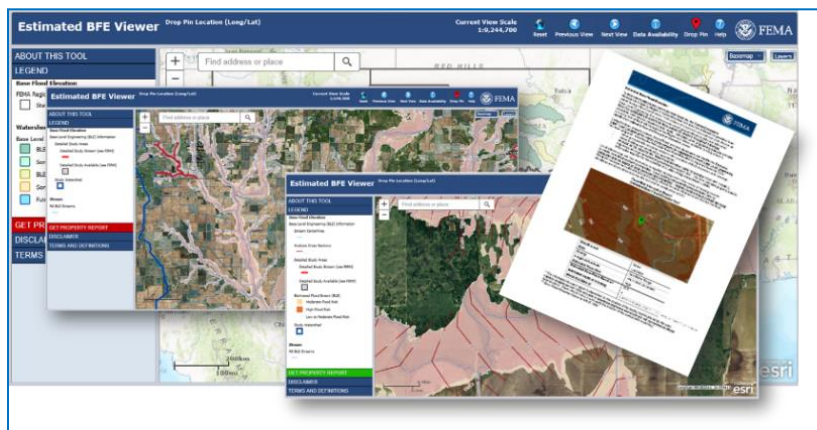
- Hydraulic Modeling (10%, 4%, 2%, 1%, 1%+ and 0.2%)
- 10%, 1% and 0.2% Floodplains
- 1% and 0.2% Water Surface Grids
- 1% and 0.2% Flood Depth Grids
- Hazus Level 2

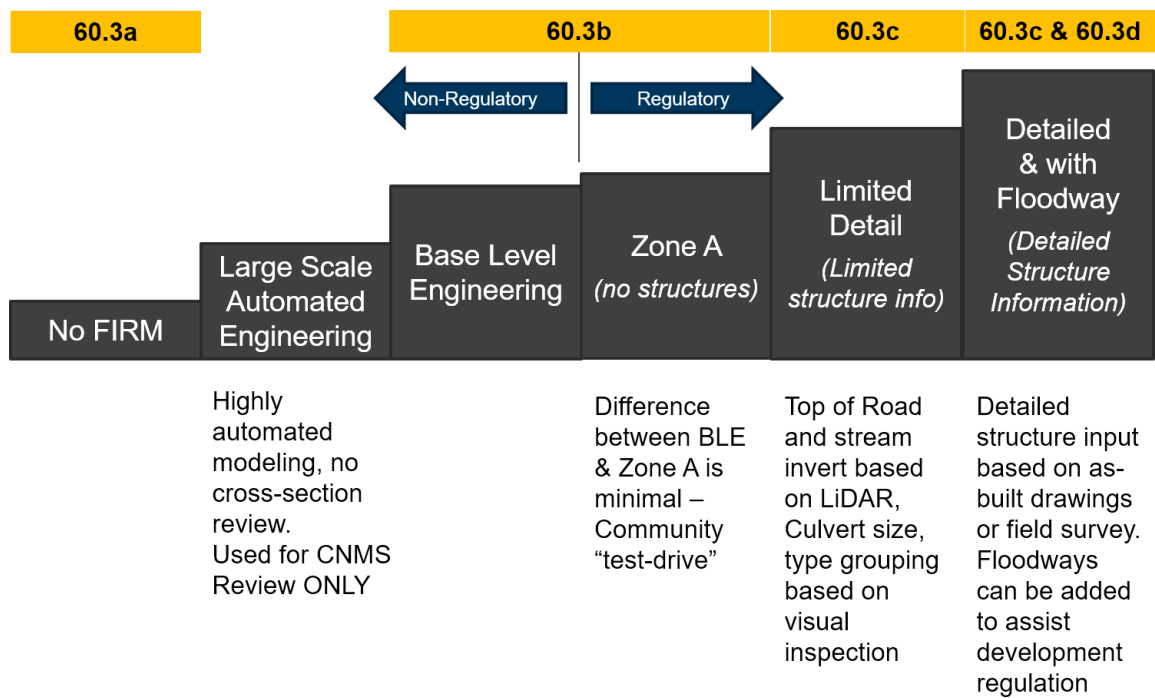
### Estimated BFE Viewer

- Uses BLE Analysis
- Designed as effective tool for community leaders and resident to make informed decisions
- [https://apps.femadata.com/es\\_tbf](https://apps.femadata.com/es_tbf)



**APPROACH:** This approach creates data that may be used to assess stream inventory, prioritize watersheds or stream segments for further study, provides a sounding board and initiates a discussion with communities that revolves around risk information, risk identification and indication of flood risk abatement and mitigation strategies that may reduce current or future flood risk. Products can be used to communicate flood risk to residents and model how development may affect the manner in which water is conveyed through their community or be adopted by local communities with no FIRMs.





- ### BLE Approach
- High resolution ground elevation data
  - Regression equation based hydrology
  - Highly automated hydraulic modeling
  - Lessons learned in Map Modernization
  - Cross-section location and orientation review
  - Structure cross-sections included in modeling

- ### BLE Creates
- Baseline models equivalent to Zone A floodplains
  - Scalable Flood Hazard modeling that can be refined by community
- ### BLE Refinement
- Dams & Reservoirs
  - Culverts

**Does BLE replace a FIRM?** Base Level Engineering (BLE) information does NOT replace current Flood Insurance Rate Maps (FIRM). The BLE information can be adopted by local communities without any FIRMs and may be used in areas where no flood hazard information is shown on the FIRM. Where the BLE results are similar OR more conservative it may be used to provide Estimate Base Flood Elevations to residents. Where BLE is smaller than the current FIRM it should NOT be used to provide Estimated Base Flood Elevations. This data may be used for local planning purposes.

More details on BLE: <http://www.riskmap6.com/Resources.aspx>