



**FEMA**

December 15, 2025

The Honorable Christopher Perales, Mayor  
City of Terrytown  
116 Terry Boulevard  
Gering, Nebraska 69341

Re: 30-Day Engineering Models Notification

Dear Mayor Perales:

This letter is to notify you of the engineering data models that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) is using in the ongoing flood hazard mapping project for Scotts Bluff County, Nebraska, including the City of Terrytown. FEMA's goal is to provide useful, credible data, as well as a fair process to help you make informed decisions to build a safer and stronger community. A kickoff meeting for the project will be held on December 18, 2025 at 11:30 a.m. MST at the Lied Scottsbluff Public Library, 1809 3rd Avenue, Scottsbluff, Nebraska 69361. If you are unable to attend in person, you may join virtually via Zoom: <https://us02web.zoom.us/meeting/register/8GVDzT4VT5GqEozcRmcmGg>.

These engineering data models will form the basis for the proposed Special Flood Hazard Areas (SFHAs) that will be shown on the Flood Insurance Rate Map (FIRM) for your community. An SFHA is an area that is subject to inundation by the 1-percent-annual-chance flood (also called the base flood). Over time, water flow and drainage patterns in your area may have changed due to surface erosion, land use, and natural forces. Given these factors, the likelihood of flooding in certain areas may have increased or decreased, changing the SFHA designations.

Draft flood hazard information for Scotts Bluff County, Nebraska, will be developed by FEMA's mapping partner, the Nebraska Department of Water, Energy, and Environment (DWEE). DWEE will use the engineering models shown on the attached Engineering Models Summary Map, which shows the flooding sources to be studied. The engineering models were selected based on a variety of factors including, but not limited to, the type of study performed, the size of the drainage area affecting the flooding source, and the type of terrain present (e.g., flat, hilly, etc.). For all methodologies, water surface elevation for the 0.2-percent, 1-percent, 1-percent plus, 2-percent, 4-percent, and 10-percent annual chance intervals will be determined. DWEE will use the best available Light Detection and Ranging (LiDAR) topographic data to develop the hydraulic models and to delineate flood hazard boundaries for Zone A and Zone AE studies. Structures and survey will be included in the models that will be used for Zone AE mapping.

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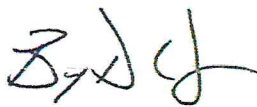
This project also includes production of flood risk products, which can help inform your community's flood risk planning and advance its work to reduce flood risk. DWEE will schedule a Flood Risk Review meeting for the City of Terrytown and the unincorporated areas of Scotts Bluff County to review and discuss the proposed SFHAs, engineering analyses results and draft flood risk data tools, and to share strategies to reduce flood risk. This meeting will be held after the data development is complete in 2027.

Upon receipt of this notification, your community will have 30 days to consult with Jared Ashton of DWEE, or David Ard of my staff, regarding the appropriateness of the models and methods selected for the project. During the 30-day period, please provide us with any data that you have that may be relevant to the project. We would also appreciate it if you would provide us with contact information, including email addresses, for any community officials, staff members or stakeholders who you believe would benefit from receiving updates and information about this project. Please note that your community will have several more opportunities to comment on and provide feedback about the models, the resulting SFHA delineations, and the draft flood hazard information, including an appeal period, before the flood hazard information is officially effective.

FEMA's goal is to ensure that the most up-to-date and accurate technical data are used to develop flood risk products. We rely on your feedback, partnership and knowledge during this important project to determine the extent of flood risk in your community, and in support of your efforts to reduce those risks. We look forward to working with community officials and other stakeholders in the City of Terrytown and the unincorporated areas of Scotts Bluff County to raise flood risk awareness and reduce the risk to life and property from flooding. Your initial feedback will not affect your community's ability to provide feedback later, or to formally appeal the flood hazard information during a future appeal period.

To provide comments or to ask questions about this project, please contact DWEE's project manager, Jared Ashton, at (402) 471-0500 or [jared.ashton@nebraska.gov](mailto:jared.ashton@nebraska.gov), or FEMA's project officer, David Ard of my staff, at (202) 431-5426 or [david.ard@fema.dhs.gov](mailto:david.ard@fema.dhs.gov).

Sincerely,



Bryan D. Murdie, Chief  
Risk Analysis Branch

Enclosures: Engineering Models Summary Table

cc: Jeni Mattern, City Clerk, City of Terrytown  
Jeff Wolfe, City Engineer, City of Terrytown  
Elijah Kaufman, State of Nebraska National Flood Insurance Program (NFIP)  
Coordinator  
David Ard, Project Officer, FEMA Region 7

Flooding Source	Reach	Hydrology Method	Hydraulic Method	Rationale For Models Selected
Zone A Tributaries	Zone A tributaries in Scotts Bluff County	National Oceanic and Atmospheric Administration's (NOAA) Atlas 14 precipitation frequency data and HEC-RAS "rain on grid" methodology	Two-Dimensional (2D) unsteady state HEC-RAS model	<p>Rain on grid allows for a more spatially detailed representation of rainfall and runoff processes by simulating temporally and spatially varied storm hyetographs across the watershed and allowing HEC-RAS to calculate infiltration, runoff, and timing.</p> <p>2D modeling is used to simulate surface-water flow in two directions in a horizontal plane, such as in shallow flooding areas, split-flow situations, and at complex bridge sites</p>
North Platte River	Nebraska/Wyoming State Line to Scotts Bluff/Morill County Line	U.S. Army Corps of Engineers (USACE) Regulated Flood Frequency Analysis for the North Platte River at North Platte, NE Report	Two-Dimensional (2D) steady state HEC-RAS model	<p>The report was developed by USACE and partners to account for the effects of regulation (dams and reservoirs) on hydrologic events.</p> <p>See above note on 2D HEC-RAS model.</p>
Sunflower Drain	Upstream of Eskam Farm Rd to 1 sq mi limit	NOAA Atlas 14 precipitation frequency data and HEC-RAS "rain on grid" methodology	Two-Dimensional (2D) unsteady state HEC-RAS model	<p>See above note on rain on grid methodology.</p> <p>See above note on 2D HEC-RAS model.</p>
Sunflower Drain	Eskam Farm Rd. to Confluence with Tub Springs Drain	HEC-HMS	Two-Dimensional (2D) unsteady state HEC-RAS model	<p>HEC-HMS provides a variety of options for detailed simulation of precipitation-runoff processes and creates flood hydrographs needed as input into an unsteady hydraulic model.</p> <p>See above note on 2D HEC-RAS model.</p>

Flooding Source	Reach	Hydrology Method	Hydraulic Method	Rationale For Models Selected
Tub Springs Drain	Upstream of Co. Rd. 20 to 1 sq mi limit	NOAA Atlas 14 precipitation frequency data and HEC-RAS "rain on grid" methodology	Two-Dimensional (2D) unsteady state HEC-RAS model	See above note on rain on grid methodology. See above note on 2D HEC-RAS model.
Tub Springs Drain	Co. Rd. 20 to Confluence with North Platte River	HEC-HMS	Two-Dimensional (2D) unsteady state HEC-RAS model	See above note on HEC-HMS model. See above note on 2D HEC-RAS model.
Winters Creek	Upstream of Tri-State Canal to 1 sq mi limit	NOAA Atlas 14 precipitation frequency data and HEC-RAS "rain on grid" methodology	Two-Dimensional (2D) unsteady state HEC-RAS model	See above note on rain on grid methodology. See above note on 2D HEC-RAS model.
Winters Creek	Just downstream of Tri-State Canal to Confluence with North Platte River	HEC-HMS	Two-Dimensional (2D) unsteady state HEC-RAS model	See above note on HEC-HMS model. See above note on 2D HEC-RAS model.