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Ravalli County Commissioners

November 5, 2013

The Honorable Suzy Foss
Ravalli County Board of Commissioners
215 South Fourth Street, Suite A
Hamilton, MT 59840

Community: Ravalli County
Community No.: 30081C

Dear Commissioner Foss:

This is in response to a letter dated October 1, 2013 from Mr. Brian Wilkinson, Ravalli County Floodplain Manager, regarding the proposed Special Flood Hazard Area (SFHA) boundary for Bitterroot River, as presented on the Preliminary Flood Insurance Rate Map (FIRM) and in the Preliminary Flood Insurance Study (FIS) report for Ravalli County, dated May 1, 2012. The letter was provided as a response to FEMA and the Montana DNRC's appeal resolution letter dated September 3, 2013 and states concerns in regard to three different subjects:

1. Floodplain islands ("freckles") that are currently shown out of the effective floodplain limits being included due to the redelineation of the floodplain.
2. The base flood elevation and delineation of the floodplain behind levee/non-levee embankments.
3. Areas shown to be above the Base Flood Elevations (BFE) by the LiDAR data, but included in the preliminary SFHA.

The letter did not include the submission of additional scientific or technical data.

A response to the three different subjects was provided in the September 3, 2013 Appeal Resolution letter, on a September 12, 2013 Appeal Resolution conference call, and are resummarized below:

1. Mr. Wilkinson requested information on where the "general mapping criteria" used to delineate the SFHA boundary along the Bitterroot River is written down. It was explained that the SFHA boundary along the Bitterroot River, specifically in regards to islands outside the SFHA, were mapped according to engineering judgment based on map scale along with the size, elevation, and shape of the islands. The general criteria utilized for the Bitterroot River was for islands less than 1 acre in size and less than two feet above the base flood elevation to be included within the SFHA. The size criterion is based on visibility and legibility for the island given the FIRM panel scale. The elevation criteria relates to expected error within the topographic data set which can be up to one foot higher or lower than the reported elevation. Specific criteria for mapping small islands outside the SFHA are not included in FEMA's Guidelines and Specifications because it is highly dependent on numerous factors including: the quality of the topographic data, the FIRM panel scale, the size and shape of the islands, the nature of the flooding source, and the impact of other features that

need to be displayed on the FIRM. To accommodate the County's original appeal, all areas identified as areas of concern by the County were removed from the SFHA if the islands were identifiable at map panel scale.

2. Mr. Wilkinson expressed concern that the Bitterroot River mapping in the vicinity of Non-Levee Embankments (NLE) did not follow procedures specified in FEMA's Guidelines and Specifications. For NLEs, FEMA's Guidelines and Specifications require that the Base Flood Elevations be shown with the embankment in place for the riverward side of the embankment, and the Base Flood Elevations be shown with the embankment removed for the landward side of the embankment. This procedure is consistent with the methods described in FEMA's Guidelines and Specifications, Appendix H, Section H.5., which states "*The Mapping Partner shall consider the 1-percent-annual-chance flood levels on the unprotected side (river side) of the levee to be equal to the 1-percent-annual-chance water-surface elevations computed with the levee in place*".

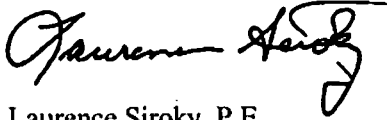
The areas behind the NLEs along the Bitterroot River were determined to be ineffective flow areas, or areas where water would pond but would not actively convey water during a 1-percent-annual-chance event. As a result, the Base Flood Elevations on the riverward side of the embankment (with the embankment in place) and the landward side of the embankment (with the embankment removed) are identical. The Base Flood Elevations utilized for defining the SFHA boundaries at and around the non-levee embankments remain valid and are consistent with the requirements of FEMA's Guidelines and Specifications.

3. Mr. Wilkinson expressed concern that there are many areas that were not identified by the County in the original appeal that should not be included in the SFHA. It was explained that if the County has subsequent technical or scientific data to update the flood hazard information shown on the preliminary FIRM, that data can be submitted through the Letter of Map Revision (LOMR) process once the DFIRM for Ravalli County becomes effective. Instructions and application forms for submitting a LOMR can be downloaded from the FEMA website at <http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions>. Additionally, we have confirmed that certified LiDAR data can be used in some instances to support Letter of Map Amendment (LOMA) and Letter of Map Revision Based on Fill (LOMR-F) requests. We will coordinate directly with Mr. Wilkinson on specific requirements for utilizing LiDAR data to support LOMA and LOMR-F requests in Ravalli County after the issuance of this letter.

FEMA believes all issues raised in your original appeal letter, dated October 15, 2012, were adequately addressed by the September 3, 2013, Appeal Resolution letter and a September 12, 2013 project update and Appeal Resolution conference call. FEMA will move ahead with the Letter of Final Determination (LFD) for the Ravalli County at this time.

We appreciate your community's comments and commitment to having the most accurate flood hazard information available reflected on the FIRM and in the FIS report. If you have any questions regarding this matter, please contact Mr. Sean McNabb of my office by telephone at (303) 235-4303 or by e-mail at sean.mcnabb@fema.dhs.gov.

Sincerely,



Laurence Siroky, P.E.

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Ryan Pietramali

Director, Mitigation Division
FEMA Region VIII

cc: Mr. Brian Wilkinson, Ravalli County Floodplain Administrator
Mr. Sean McNabb, FEMA Region VIII
Mr. Steve Story, Montana DNRC