



**FEMA**

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July 21, 2015

MEMORANDUM FOR: Tom Carroll, Recovery Division Director  
Steve Hardegen, Regional Environmental Officer  
Mike Hillenburg, Acting Mitigation Division Director

FROM: Tom Bush, Public Assistance Branch Chief *JB*  
Ryan Pietramali, Risk Analysis Branch Chief *RP*

SUBJECT: Special Response Memorandum - Guidance for use of Colorado Front Range Hydrologic Evaluations (Phase 2) in complying with 44 CFR Part 9 and Executive Order 11988 (Floodplain Management) for areas seeing an update.

Due to the catastrophic nature of the September 2013 flooding in the Colorado Front Range, the Federal Emergency Management Agency (FEMA) is committed to providing guidance for communities in situations where the effective Flood Insurance Rate Map (FIRM) and accompanying Flood Insurance Study (FIS) do not represent current conditions. In these instances, FEMA recommends the use of Best Available Data to inform recovery projects in regulatory floodplains. Using Best Available Data during rebuilding efforts ensures a resilient Colorado recovery while providing the maximum benefit to the local communities. It also ensures Federal, State, and local resources are used to mitigate future flood damage.

Following the 2013 flood event FEMA's Cooperating Technical Partner the Colorado Water Conservation Board (CWCB) partnered with the Colorado Department of Transportation (CDOT) to update the hydrology and determine current flood frequency discharges for the Colorado Front Range watersheds. These studies include analysis of historical flooding, flood frequency analysis, and detailed hydrologic rainfall runoff modeling. FEMA has reviewed the studies and determined that they meet the requirements set forth by the Standards for Flood Risk Analysis and Mapping, issued May 27, 2014 and may be considered Best Available Data by communities.

Best Available Data can be either: 1) the existing flood hazard data adopted by the community and reflected on the effective FIS or FIRM or 2) preliminary flood hazard data (new CWCB/CDOT data). In order achieve the lower level of risk, the applicant should apply the more conservative data that anticipates the higher estimated flows and flood elevations, and therefore requires more regulatory restrictions on where and how structures can be rebuilt. Communities must go through their local adoption process to formally accept the information in order to be considered Best Available Data.

The hydrology update is being completed under a phased approach. The Phase 1 guidance has been addressed in the Special Response Memorandum dated November 6, 2014. The Phase 2 guidance includes the hydrologic analyses for the following watersheds, from the canyon mouths to the confluence with the South Platte River:

1. ***Lower Big Thompson Watershed; Phase 2 Hydrologic Evaluation***; Post September 2013 Flood Event; Prepared by Jacobs, Muller, Parsons Brinckerhoff and Ayres Associates for the Colorado Department of Transportation; July 2015
2. ***Lower St. Vrain Watershed; Phase 2 Hydrologic Evaluation***; Post September 2013 Flood Event; Prepared by Jacobs, Muller, Parsons Brinckerhoff and Ayres Associates for the Colorado Department of Transportation; July 2015
3. ***Boulder Creek Hydrologic Analysis; Phase 2: Boulder Creek above St. Vrain Creek***; Prepared by CH2MHILL for the Colorado Department of Transportation; June 2015
4. ***Little Thompson River Hydrologic Analysis; Phase 2: Little Thompson River above Big Thompson River***; Prepared by CH2MHILL for the Colorado Department of Transportation; June 2015

The final reports related to the Phase 2 Hydrology Studies are available through the CWCB website at: <http://cwcb.state.co.us/water-management/flood/Pages/2013FloodResponse.aspx>.

Pursuant to 44 CFR 9.7(c) and 9.13(d)(1), projects funded through FEMA's Recovery programs can utilize Best Available Data to guide recovery decisions. For FEMA Public Assistance projects for which funds have not been obligated as of the date of this memo, projects can be designed using the updated CDOT/CWCB hydrologic data referenced in this special response memorandum or the data contained in the current effective FIRM and corresponding FIS, whichever anticipates higher flows and results in more effective conveyance and flood mitigation. Local floodplain development permits will be required.

Additionally, Executive Order 11988 requires all Federal agencies to avoid the long and short-term adverse impacts associated with the occupancy and modification of floodplains to the extent possible. The project must comply with all applicable Federal, Tribal, State and local regulations, including obtaining all required permits prior to construction. In the event potential adverse impacts are identified, the local applicant should be prepared to take steps to minimize and mitigate the impacts during rebuilding efforts. Additional information on avoiding and minimizing adverse impacts can be found at <http://www.floods.org/index.asp?menuID=460>.

If you have any questions or need additional information regarding this guidance, please contact Roger Jones, Recovery Division, by telephone at (303) 235-4907 or Matthew Buddie, Federal Insurance and Mitigation Administration, by telephone at (303) 235-4730.