



NATIONAL FLOOD INSURANCE PROGRAM

FEMA PRODUCTION AND TECHNICAL SERVICES CONTRACTOR

December 5, 2017

Mr. David Cloutier, P.E.
Water Resources Engineer
VHB
101 Walnut Street
Watertown, MA 02471

IN REPLY REFER TO:
Case No.: 18-01-0144P
Community: Town of Exeter, NH
Community No.: 330130

316-AD

Dear Mr. Cloutier:

This responds to your request received on October 19, 2017, that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) issue a revision to the Flood Insurance Rate Map (FIRM) for Rockingham County, New Hampshire (All Jurisdictions). Pertinent information about the request is listed below.

Identifier:	Great Dam Removal
Flooding Sources:	Exeter River, Little River No. 1, Scamen Brook and Unnamed Tributary to Exeter River
FIRM Panels Affected:	33015C0382E, 0401E, 0402E, 0403E, 0404E, 0406E, and 0408E

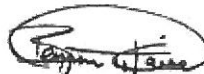
The data required to complete our review, which must be submitted within 90 days of the date of this letter, are listed on the attached summary.

If we do not receive the required data within 90 days, we will suspend our processing of your request. Any data submitted after 90 days will be treated as an original submittal.

FEMA receives a very large volume of requests and cannot maintain inactive requests for an indefinite period of time. Therefore, we are unable to grant extensions for the submission of required data for revision requests. If a requester is informed by letter that additional data are required to complete our review of a request, the data **must** be submitted within 90 days of the date of the letter.

If you have general questions about your request, FEMA policy, or the National Flood Insurance Program, please contact the FEMA Map Information eXchange (FMIX), toll free, at 1-877-FEMA MAP (1-877-336-2627). If you have specific questions concerning your request, please contact your case reviewer, Ms. Ekta Amar, P.E., CFM, by e-mail at eamar@leonardjackson.net or by telephone at (231)-408-8046, or the Revisions Coordinator for your state, Ms. Ellie Pitney, by e-mail at pitneyej@cdmsmith.com or by telephone at (303) 383-2318.

Sincerely,

A handwritten signature in black ink, appearing to read "Benjamin Kaiser", enclosed within a hand-drawn oval.

Benjamin Kaiser, P.E., CFM
Revisions Manager
Compass PTS JV

Attachment:

Summary of Additional Data

cc: Mr. Douglas Eastman
Code Enforcement Officer
Town of Exeter

Mr. Paul Vlasich
Town of Exeter Engineer

Mr. Jacob San Antonio
Managing Director – Environmental Resources
VHB



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Summary of Additional Data Required to Support a Letter of Map Revision (LOMR)

Case No.: 18-01-0144P

Requester: Mr. David Cloutier, P.E.

Community: Town of Exeter, NH

Community No.: 330130

The issues listed below must be addressed before we can continue the review of your request.

1. Our review of the submitted hydraulic model for the post-project floodway analysis for the Exeter River revealed the following issues. Please update the floodway analysis and submit the revised hydraulic model for review.
 - a) Please revise the encroachment stations at Cross Sections 19704, 19646, 19595, 19494, 14936, and 5422 as either right or left encroachment stations at these cross sections are set outside the 1-percent-annual-chance (base) floodplain limits in the hydraulic model. Encroachment stations should be set within the floodway fringe i.e., the area between the channel bank station and the limits of the base floodplain.
 - b) Please revise the encroachment stations at Cross Sections 19324, 19156, 18914, 7463, and 7301 as they are set within an area of ineffective flow. The encroachment stations should be set so that the floodway is completely within effective flow area.
 - c) The post-project floodway delineation shown in the submitted workmap entitled "Topographic Work Map" prepared by VHB and dated September 2017 revealed that the post-project floodway delineation is not hydraulically smooth between Cross Sections 10367 to 11320, Cross Sections 13166 to 13928, Cross Sections 15812 to 16735, and Cross Sections 17483 to 18914. Please revise the delineations (especially on the left overbank) so that floodway is hydraulically smooth.
 - d) The surcharges at Cross Sections 1839, 1054 and 848 are -0.07 foot, -0.06 foot and -0.11 foot, respectively. Please revise the floodway model so that surcharges remain between 0.0 feet and 1.0 foot at all cross sections.
 - e) The topwidths of the regulatory floodway computed in the post-project conditions hydraulic model at the cross sections listed in the table below do not match the approximate floodway topwidths shown on the above-referenced topographic work map. Please submit a revised hydraulic analysis or revised work maps as appropriate to resolve these discrepancies.

Cross Section	Floodway Topwidth (feet)	
	Model	Map
28834	901	959
17942	1322	1269
16924	1371	1340
16557	1492	1743
11603	632	583
11517	559	590
9600	1019	990
9189	793	830
8200	715	747
5210	450	509
4075	407	439

2. Our review of the submitted hydraulic models for Little River No. 1 revealed the following issues. Please update the models and submit the revised hydraulic models for review.
- Please revise the encroachment stations in the post-project floodway analysis at Cross Sections 10288 and 5375 as they are set within an area of ineffective flow. The encroachment stations should be set so that the floodway is completely within effective flow area.
 - From the post-project floodway analysis, the surcharge at Cross Section 10367 (Cross Section M) is -0.72 foot. Please revise the floodway model so that surcharges remain between 0.0 feet and 1.0 foot at all cross sections.
 - Our review of the workmap and hydraulic model revealed that the upstream most Cross Section 12906 is set approximately 240 feet downstream of the effective limit of study. Please add another cross section right at the limit of study location so that entire revision area can be updated based on the updated Water Surface Elevation (WSEL).
 - The topwidths of the base floodplain computed in the post-project conditions HEC-RAS hydraulic model at Cross Section 12907 do not match the approximate floodplain topwidths shown on the above-referenced topographic work map. As per the model, the topwidth is 324 feet, but it is approximately 297 feet in the work map. Please provide an explanation for the discrepancy, or submit a revised hydraulic analysis and/or work maps as appropriate.
 - The topwidths of the regulatory floodway computed in the post-project conditions hydraulic model at the cross sections listed in the table below do not match the approximate floodway topwidths shown on the above-referenced topographic work map. Please submit a revised hydraulic analysis or revised work maps as appropriate.

Cross Section	Floodway Topwidth (feet)	
	Model	Map
10288	117	167
9951	162	118
9566	122	156

3. The above-referenced topographic work map does not provide some of the essential information required to complete our review of this request. Please submit a revised topographic work map, certified by a registered Professional Engineer (P.E.) that shows all applicable items listed in Section C of Application/Certification Form 2, entitled "Riverine Hydrology & Hydraulics Form," including the following information.
 - a. The Exeter River post-project base floodplain and 0.2-percent-annual-chance floodplain delineations extend until preliminary hydraulic model Cross Section 40787. It is recommended however, to terminate the revised post-project delineation at Kingston Road/Route 111. By showing graphical tie-in at Kingston Road/Route 111, the revision area will remain entirely within the Town of Exeter. Since Kingston Road controls the flood elevations upstream, a vertical tie-in requirement can be waived between the effective and post-project model at this location. Also, there is perfect 0.00 feet vertical tie-in with the preliminary model at Kingston Road. Therefore, please show the graphical tie-in in the work map and annotated FIRM at Kingston Road. There should be no change in the pre and post-project hydraulic model for the multiple run and floodway analysis upstream of the Kingston Road from the base preliminary hydraulic model. Please update the graphical tie-in location in the work map. Please note that if you intend to show the graphical tie-in at preliminary hydraulic model Cross Section 40787, then the Town of Brentwood will also be affected by this revision. If the Town of Brentwood is affected, then please submit MT-2 Form 1, entitled "Overview and Concurrence Form," that includes the signature of a Town of Brentwood community official on the 2nd block of Section D. All forms and instructions are available for your information on the FEMA website at <http://www.fema.gov/library/viewRecord.do?id=1493>
 - b. Please update the boundary delineations of the post-project conditions base floodplain, 0.2-percent-annual-chance floodplain, and regulatory floodway of all flooding sources based on comments in the hydraulic model requested above. Please ensure that the revised floodway is shown within the revised base floodplain delineation. At several locations along Exeter River, the revised floodway line is shown outside the base floodplain delineation line. It should always be within, or coincident with, the base floodplain. Please update the post-project floodway delineation appropriately.
 - c. Please show the boundary delineations of the currently effective regulatory floodway also along with base and 0.2-percent-annual-chance delineation for all flooding sources.
 - d. Please show proper graphical logical tie-ins between the revised and effective flood hazard boundary delineations at the upstream and downstream ends of the Exeter River. The revised delineations should be extended to merge smoothly with the effective delineations. Please ensure that there is smooth tie-in between the Zone AE and Zone A floodplains at the border between the Towns of Exeter and Kensington. The tie-in location must be within the Town of Exeter, otherwise, concurrence will need to be provided by the Town of Kensington.
 - e. Please show the delineation of the floodway within the Town of Kensington on the work map and annotated FIRM. The submitted work map currently shows the right overbank of the floodway truncated at the community boundary between Cross Sections 19756 and 18313. Please note that even if the eventual LOMR Flood Insurance Rate Map (FIRM) shows the floodway truncated, the work map and annotated FIRM should show the complete floodway delineated according to the encroachment stations in the model.
 - f. Please provide reference to a datum, such as the North American Vertical Datum of 1988 (NAVD 88) on the work map.

4. Based on revision in the work maps as requested above, please submit updated annotated FIRM panels.
5. The submitted property owner notification letters will be reviewed after the post-project model and work map delineation for Exeter River and Little River No. 1 are finalized. Please do not distribute the letters unless they are approved by us.

Please send the required data to:

LOMC Clearinghouse
Attention: LOMR Manager
3601 Eisenhower Avenue, Suite 500
Alexandria, VA 22304-6426

For identification purposes, please include the case number referenced above on all correspondence.