



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

| COMMUNITY AND REVISION INFORMATION | | PROJECT DESCRIPTION | BASIS OF REQUEST |
|------------------------------------|--|---|---|
| COMMUNITY | City of Boulder Boulder County Colorado | CULVERT BRIDGE | FLOODWAY HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS NEW TOPOGRAPHIC DATA |
| | COMMUNITY NO.: 080024 | | |
| IDENTIFIER | Upper Goose Creek and Twomile Canyon Creek Floodplain Mapping Update | APPROXIMATE LATITUDE & LONGITUDE: 40.034, -105.278 SOURCE: USGS QUADRANGLE DATUM: NAD 83 | |
| ANNOTATED MAPPING ENCLOSURES | | ANNOTATED STUDY ENCLOSURES | |
| TYPE: FIRM* | NO.: 08013C0391J DATE: December 18, 2012 | DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 18, 2012 | |
| TYPE: FIRM* | NO.: 08013C0392J DATE: December 18, 2012 | PROFILES: 180P-182P, 362P-366P, 381P-409P | |
| TYPE: FIRM* | NO.: 08013C0393J DATE: December 18, 2012 | FLOODWAY DATA TABLE: 6 | |
| TYPE: FIRM* | NO.: 08013C0394J DATE: December 18, 2012 | SUMMARY OF DISCHARGES TABLE: 4 | |

Enclosures reflect changes to flooding sources affected by this revision.

* FIRM - Flood Insurance Rate Map, ** FBFM - Flood Boundary and Floodway Map, *** FHBM - Flood Hazard Boundary Map

FLOODING SOURCE & REVISED REACH

See Page 2 for Additional Flooding Sources

Goose Creek - From approximately 80 feet downstream of 27th Street to approximately 80 feet upstream of 9th Street.

SUMMARY OF REVISIONS

| Flooding Source | Effective Flooding | Revised Flooding | Increases | Decreases |
|-----------------|--------------------|------------------|-----------|-----------|
| Goose Creek | Floodway | Floodway | YES | YES |
| | BFEs | BFEs | YES | YES |
| | Zone AE | Zone AE | YES | YES |
| | Zone X (shaded) | Zone X (shaded) | YES | YES |

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
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**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

OTHER FLOODING SOURCES AFFECTED BY THIS REVISION

FLOODING SOURCES & REVISED REACHES

- Goose Creek - Alpine Split - From the confluence to approximately 1570 feet upstream of the confluence with Goose Creek.
- Goose Creek - Broadway Split - From the confluence to approximately 1130 feet upstream of the confluence with Goose Creek.
- Goose Creek - Hospital Split - From the confluence to approximately 300 feet upstream of the confluence with Goose Creek.
- Twomile Canyon Creek - From approximately 210 feet downstream of Balsam Avenue to approximately 1,260 feet upstream of Spring Valley Drive.
- Twomile Canyon Creek - 13th Split - From the confluence to approximately 400 feet upstream of the confluence with Twomile Canyon Creek.
- Twomile Canyon Creek - 4th Split East - From the confluence to approximately 650 feet upstream of the confluence with Twomile Canyon Creek.
- Twomile Canyon Creek - 4th Split South - From the confluence to approximately 420 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 1.
- Twomile Canyon Creek - Elder Split - From the confluence to approximately 1550 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 1.
- Twomile Canyon Creek - Grape Split 1 - From the confluence to approximately 770 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 1.
- Twomile Canyon Creek - Grape Split 2 - From the confluence to approximately 170 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 1.
- Twomile Canyon Creek - Hawthorn Split - From the confluence to approximately 980 feet upstream of the confluence with Twomile Canyon Creek – Grape Split 1.
- Twomile Canyon Creek - Iris Split - From the confluence to approximately 170 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 1.
- Twomile Canyon Creek - Jasmine Split - From the confluence to approximately 220 feet upstream of the confluence with Twomile Canyon Creek – Split Flow 2.
- Twomile Canyon Creek - Linden Split - From the confluence to approximately 230 feet upstream of the confluence with Twomile Canyon Creek.
- Twomile Canyon Creek - Split Flow 1 - From approximately 270 feet downstream of 18th Street to approximately 620 feet upstream of 4th Street.
- Twomile Canyon Creek - Split Flow 2 - From approximately 540 feet upstream of Folsom Street to approximately 90 feet upstream of Kalmia Avenue.
- Twomile Canyon Creek - Spring Valley Split - From the confluence to approximately 540 feet upstream of the confluence with Twomile Canyon Creek.

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LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

SUMMARY OF REVISIONS

| Flooding Source | Effective Flooding | Revised Flooding | Increases | Decreases |
|--|--------------------|------------------|-----------|-----------|
| Goose Creek | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Goose Creek - Alpine Split | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Goose Creek - Broadway Split | No BFEs | No BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Goose Creek - Hospital Split | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Twomile Canyon Creek | Floodway | Floodway | YES | YES |
| | BFEs | BFEs | YES | YES |
| | Zone AE | Zone AE | YES | YES |
| | Zone X (shaded) | Zone X (shaded) | YES | YES |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - 13th Split | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - 4th Split East | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - 4th Split South | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| Twomile Canyon Creek - Elder Split | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| Twomile Canyon Creek - Grape Split 1 | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| Twomile Canyon Creek -Grape Split 2 | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Twomile Canyon Creek - Hawthorn Split | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Twomile Canyon Creek - Iris Split | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

| | | | | |
|--|-------------------|-----------------|-----|------|
| Twomile Canyon Creek - Jasmine Split | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| Twomile Canyon Creek - Linden Split | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - Split Flow 1 | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - Split Flow 2 | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| Twomile Canyon Creek - Spring Valley Split | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |
| | No BFEs | BFEs | YES | NONE |
| | Zone X (unshaded) | Zone AE | YES | NONE |
| | Zone X (unshaded) | Zone X (shaded) | YES | NONE |
| | No Floodway | Floodway | YES | NONE |

* BFEs - Base Flood Elevations

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**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

OTHER COMMUNITIES AFFECTED BY THIS REVISION

CID Number: 080023 **Name:** Boulder County, Colorado

AFFECTED MAP PANELS

TYPE: FIRM* NO.: 08013C0391J DATE: December 18, 2012
TYPE: FIRM* NO.: 08013C0392J DATE: December 18, 2012

AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT

DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 18, 2012
PROFILES: 366P, 393P, 399P, 407P
FLOODWAY DATA TABLE: 6
SUMMARY OF DISCHARGES TABLE: 4

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance discharges computed in the submitted hydrologic model. Future development of projects upstream could cause increased discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on discharges and could, therefore, indicate that greater flood hazards exist in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Ms. Jeanine D. Petterson
Director, Mitigation Division
Federal Emergency Management Agency, Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267
(303) 235-4830

STATUS OF THE COMMUNITY NFIP MAPS

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *The Daily Camera*

Dates: April 13, 2016 and April 20, 2016

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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