



COLORADO

**Colorado Water
Conservation Board**

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TO: Colorado Water Conservation Board Members

FROM: Kevin Houck, P.E., Chief
Watershed and Flood Protection Section

DATE: April 27, 2017

AGENDA ITEM: Consent Agenda Item 3, Floodplain Designation

Background: Agenda Item 2 includes one new floodplain study that is proposed for CWCB action. Staff is requesting Board designation and approval for this item. A brief summary of the study is presented in the attached document.

CWCB staff performs technical reviews of floodplain information to assure the Board that the information is in compliance with the requirements of the CWCB's "Rules and Regulations for Regulatory Floodplains in Colorado," 2 CCR 408-1. A further discussion of legislative authority and responsibilities delegated to the CWCB, is provided in the attached document. The CWCB's designation and approvals greatly assist local communities in meeting the statutory requirements of the State and the regulatory requirements of the National Flood Insurance Program.

Additional supporting information for these items is attached.

Requested Action for Floodplain Resolution 17-669: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year hydrologic information contained in said report for Cabin Creek, North Saint Vrain Creek, Saint Vrain Creek, Middle Saint Vrain Creek, South Saint Vrain Creek, Dry Creek #2, Fourmile Canyon Creek, Two Mile Canyon Creek, Lower Boulder Creek, New Dry Creek, North Boulder Creek, Middle Boulder Creek, Boulder Creek, South Boulder Creek, Coal Creek, and Rock Creek within Boulder County, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Boulder County and FEMA. This action is recommended in order to meet statutory requirements.



Attachment - Supporting Information

Consent Agenda Item 2 - Floodplain Designation May 2017

Summary

Consent Agenda Item 2 includes one floodplain study/map that is proposed for CWCB action. Staff is requesting Board designation and approval for this item. A brief summary of the study is presented below.

CWCB staff performs technical reviews of floodplain information to assure the Board that the information is in compliance with the requirements of the CWCB's "Rules and Regulations for Regulatory Floodplains in Colorado," 2 CCR 408-1. Furthermore, Sections 31-23-301 and 30-28-111, Colorado Revised Statutes, state that legislative bodies of local jurisdictions may provide zoning regulations for land uses on or along any storm or floodwater runoff channel or basin only after designation and approval by the CWCB. In addition, Section 37-60-106(1)(c), Colorado Revised Statutes, directs the CWCB to designate and approve storm or floodwater runoff channels or basins and to make such designations available to legislative bodies of local jurisdictions.

The CWCB's designation and approvals greatly assist local communities in meeting the statutory requirements of the State and the regulatory requirements of the National Flood Insurance Program. Floodplain information is broadly categorized as detailed or approximate using the following definitions. Detailed floodplain information means floodplain information prepared using topographic base maps, hydrologic analyses, and hydraulic calculations to arrive at precise water surface profiles and floodplain delineations suitable for making land use decisions under statutorily authorized zoning powers. Approximate floodplain information means floodplain information prepared using a significantly reduced level of detail to arrive at floodplain (hazard delineation) without water surface profiles.

CWCB staff performs technical reviews on the following types of reports and maps for approval and designation by the Board:

- "Flood Insurance Study" (FIS), which is produced by the Federal Emergency Management Agency (FEMA) and used for floodplain management, regulation, and insurance purposes.
- "Flood Insurance Rate Map" (FIRM), which is produced by FEMA and used for floodplain management, regulation, and insurance purposes. A FIRM may be published with or without an associated hydrologic and hydraulic report.
- "Flood Hazard Boundary Map" (FHBM), which was produced by the Federal Insurance Administration and are used for floodplain management, regulation, and insurance purposes. An FHBM usually depicts approximate floodplain boundaries only, and does not have an accompanying report. Note: For all FHBM designations, the CWCB staff will perform (in-house or by contract with a consultant) hydrologic analyses.
- "Floodplain Information Report", which is produced by local governments, state and federal agencies, special districts, or the private sector, and are used for floodplain



management purposes and sometimes adopted by FEMA for use in Flood Insurance Rate Map revisions.

- Various hydrology studies and related floodplain studies (community-wide or site specific) that depict 100-year floodplain information that is useful for floodplain management purposes.
- “Floodplain Information” is a generic term used to describe any of the above types of reports and/or maps in the CWCB’s “rules and regulations...”
- “Floodplain Resolution” is a formal document prepared by CWCB staff describing the Floodplain Information that is to be designated and approved by the Board.

Summary of Designation Actions

Floodplain resolution number: FPR 17-669

Affected communities: Boulder County

Name of study to be formally acted on: “Colorado Hazard Mapping Program, Phase I and Related Study Areas, Boulder County”, by AECOM, dated April 2017

Studied streams: This report includes 100-year and 500-year hydrologic information for Cabin Creek, North Saint Vrain Creek, Saint Vrain Creek, Middle Saint Vrain Creek, South Saint Vrain Creek, Dry Creek #2, Fourmile Canyon Creek, Two Mile Canyon Creek, Lower Boulder Creek, New Dry Creek, North Boulder Creek, Middle Boulder Creek, Boulder Creek, South Boulder Creek, Coal Creek, and Rock Creek. The studied streams are in the South Platte River watershed.

Technical Issues: Many of the rivers affected by the September 2013 flood experienced significant geomorphological change resulting in post-flood topographic conditions that varied greatly from those prior to the flood. Restudies involving a significant amount of work have already begun for many of the affected reaches due to the legislative directive associated with SB 15-245. Phase I of the Colorado Hazard Mapping Program (CHAMP), one element of SB 245, has been completed to a draft phase, and public meetings have already been conducted in many of these watersheds in partnership with local governments.

This remapping effort includes new hydrology developed by CDOT and others, new basemapping that reflects topographic conditions after the geomorphological changes experienced by many Front Range streams during the 2013 flood, and new hydraulic analyses. This effort has been financed by State money, but eventually, it is the intent to place this information on to updated FEMA Flood Insurance Rate Maps. However, this is expected to take many years, and Boulder County has indicated interest in regulating to this new data as best available information. The County would like to use this information for regulatory purposes prior to it becoming effective on FEMA maps.

This designation request is only for reaches of the subject streams located in Boulder County. Many of these waterways extend into neighboring communities. However, because the information is still considered DRAFT at this point, and designation requests have not been received from other communities, only reaches within unincorporated Boulder County are included here.



Community Response: This study was prepared by AECOM under contract with the Colorado Water Conservation Board. Numerous public meetings were held in partnership with Boulder County staff.

CWCB staff received a letter requesting designation of the subject streams on April 20, 2017. The letter indicates that the Board of County Commissioners will meet on May 16, 2017 to consider adopting the subject reaches at the county level.

Staff Findings: CWCB staff has determined that the subject 100-year and 500-year hydrologic information for the studied stream reaches is in conformance with the CWCB's rules and regulations for floodplain designation and approval. The studied stream reaches were developed by AECOM under contract and supervision of CWCB staff.

CWCB staff therefore endorses this study as containing the most current and best hydrologic information available and urges the affected communities to adopt said study for land use regulation purposes pursuant to statutory authority.

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STAFF RECOMMENDATION SUMMARY

Requested Action for Floodplain Resolution 17-669: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year hydrologic information contained in said report for Cabin Creek, North Saint Vrain Creek, Saint Vrain Creek, Middle Saint Vrain Creek, South Saint Vrain Creek, Dry Creek #2, Fourmile Canyon Creek, Two Mile Canyon Creek, Lower Boulder Creek, New Dry Creek, North Boulder Creek, Middle Boulder Creek, Boulder Creek, South Boulder Creek, Coal Creek, and Rock Creek within Boulder County, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Boulder County and FEMA. This action is recommended in order to meet statutory requirements.

