



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: July 16, 2014

AGENDA ITEM: Consent Agenda Item 4, Colorado Post Flood Awareness Mapping

Background: Consent Agenda Item 4 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.

Staff Recommendation: Staff recommends that the Board: 1) designate and approve the 100-year approximate floodplain information contained in said report for Big Thompson River, Black Canyon Creek, Boulder Creek, Buckhorn Creek, Devils Gulch, East Fork Fish Creek, Fall River, Fish Creek, Fourmile Canyon Creek, Fourmile Creek, Fox Creek, Gold Run, James Creek, Lefthand Creek, Little James Creek, Little Thompson River, North Fork Big Thompson River, North Fork Little Thompson River, North St. Vrain Creek, Redstone Creek, South Boulder Creek, South Fork Little Thompson River, South Platte River, South St. Vrain Creek, Twomile Canyon Creek, Unnamed Tributary to East Fork Fish Creek, Unnamed Tributary to Little Thompson River, and West Creek, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the communities affected by the 2013 flood within Larimer, Boulder, Weld, and Morgan Counties, and to FEMA. This action is recommended in order to meet statutory requirements.



Attachment - Supporting Information

Consent Agenda Item 4 - Floodplain Designation July 2014

Summary

Consent Agenda Item 4 includes 1 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 14-650

Affected communities: All communities affected by September 2013 Flood in Larimer, Boulder, Weld, and Morgan Counties

Name of study to be formally acted on: “Colorado Post Flood Awareness Mapping”, by Atkins, dated June 2014

Studied streams: This report includes approximate 100-year floodplain information for Big Thompson River, Black Canyon Creek, Boulder Creek, Buckhorn Creek, Devils Gulch, East Fork Fish Creek, Fall River, Fish Creek, Fourmile Canyon Creek, Fourmile Creek, Fox Creek, Gold Run, James Creek, Lefthand Creek, Little James Creek, Little Thompson River, North Fork Big Thompson River, North Fork Little Thompson River, North St. Vrain Creek, Redstone Creek, South Boulder Creek, South Fork Little Thompson River, South Platte River, South St. Vrain Creek, Twomile Canyon Creek, Unnamed Tributary to East Fork Fish Creek, Unnamed Tributary to Little Thompson River, and West 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. However, it will be many months or even years until many of these studies to be finalized due to the sheer magnitude of restudy required. Many of the affected communities have asked the CWCB for assistance in establishing approximate mapping to post-flood topographic conditions for the purpose of utilizing best available information to make landuse decisions during the recovery and redevelopment efforts prior to the remapping studies being finalized. In response, in December 2013, several scoping meetings were held with communities in Boulder, Larimer, Weld, and Morgan Counties to determine their needs and high priority areas. Areas that are already included in RiskMap projects (e.g. Cache La Poudre River watershed and St. Vrain Creek) were not considered for this project. This study uses USGS regression equations for hydrologic information, and hydraulic information was derived using automated methods associated with post-flood LIDAR mapping that was flown following the 2013 flood.

Community Response: No formal requests for designation were received. However, numerous telephone conversations and informal email contacts have demonstrated the local interest for designation of this study.

Staff Findings: CWCB staff has determined that the subject 100-year approximate floodplain information for the studied stream reaches is conformance with the CWCB’s rules and regulations for floodplain designation and approval. CWCB staff therefore endorses this



study as containing the most current floodplain mapping available and encourages the affected communities to consider adopting said study for land use regulation purposes pursuant to statutory authority. This information is considered provisional and temporary, and is not intended to rescind any previous designations for the subject streams. It is left to the discretion of the community to determine if this study represents better available information for the purposes of administering the local floodplain ordinance during the flood recovery and redevelopment process.

Requested Action for Floodplain Resolution 14-650: Staff recommends that the Board: 1) designate and approve the 100-year approximate floodplain information contained in said report for Big Thompson River, Black Canyon Creek, Boulder Creek, Buckhorn Creek, Devils Gulch, East Fork Fish Creek, Fall River, Fish Creek, Fourmile Canyon Creek, Fourmile Creek, Fox Creek, Gold Run, James Creek, Lefthand Creek, Little James Creek, Little Thompson River, North Fork Big Thompson River, North Fork Little Thompson River, North St. Vrain Creek, Redstone Creek, South Boulder Creek, South Fork Little Thompson River, South Platte River, South St. Vrain Creek, Twomile Canyon Creek, Unnamed Tributary to East Fork Fish Creek, Unnamed Tributary to Little Thompson River, and West Creek, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the communities affected by the 2013 flood within Larimer, Boulder, Weld, and Morgan Counties, and to FEMA. This action is recommended in order to meet statutory requirements.

STAFF RECOMMENDATION SUMMARY

Requested action for Floodplain Resolution 14-650: Staff recommends that the Board: 1) designate and approve the 100-year approximate floodplain information contained in said report for Big Thompson River, Black Canyon Creek, Boulder Creek, Buckhorn Creek, Devils Gulch, East Fork Fish Creek, Fall River, Fish Creek, Fourmile Canyon Creek, Fourmile Creek, Fox Creek, Gold Run, James Creek, Lefthand Creek, Little James Creek, Little Thompson River, North Fork Big Thompson River, North Fork Little Thompson River, North St. Vrain Creek, Redstone Creek, South Boulder Creek, South Fork Little Thompson River, South Platte River, South St. Vrain Creek, Twomile Canyon Creek, Unnamed Tributary to East Fork Fish Creek, Unnamed Tributary to Little Thompson River, and West Creek, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the communities affected by the 2013 flood within Larimer, Boulder, Weld, and Morgan Counties, and to FEMA. This action is recommended in order to meet statutory requirements.

