



COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Kevin Houck, P.E. CFM, Section Chief
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DATE: September 2, 2021

AGENDA ITEM: Consent Agenda Item 4. September 15-16, 2021 Board Meeting - Floodplain Designation

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 complies with the requirements of the CWCB’s “Rules and Regulations for Regulatory Floodplains in Colorado,” 2 CCR 408-1. The attached document provides a further discussion of legislative authority and responsibilities delegated to the CWCB. 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 this item is attached.

Requested action for Floodplain Resolution 21-723: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed floodplain and floodway information contained in said report for Third Creek and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Adams County, City of Commerce City, City of Brighton, and City of Aurora, and FEMA. This action is recommended in order to meet statutory requirements.

Attachment - Supporting Information

Consent Agenda Item 4 - Floodplain Designation

September 2021

Summary

Consent Agenda Item 4 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 complies 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 #21-723

Affected communities: City of Commerce City, City of Brighton, City of Aurora, Adams County

Name of study to be formally acted on: “Flood Hazard Area Delineation, Third Creek”, by Matrix Design Group, dated November 2018 and revised July 2020.

Studied streams: This report includes detailed 100-year and 500-year hydrologic and hydraulic information for Third Creek. The studied stream is in the South Platte River watershed.

Technical Issues: This report was authorized by the Urban Drainage & Flood Control District (UDFCD) (now referred to as Mile High Flood District) under joint sponsorship with Adams County, Commerce City, the City of Brighton, and the City of Aurora. The purpose of this report is to provide updated hydrologic and hydraulic information for the Third Creek watershed, excluding the reach through Denver International Airport. The project area for this study was originally the entire Third Creek watershed to the South Platte River. However, this revision of the study truncates the analysis at 132nd Avenue since a spill to Third Creek from Second Creek was discovered at this reach after the original document was published. This lower portion of Third Creek is being studied in the ongoing Second Creek Flood Hazard Area Delineation. The total watershed contains a drainage area of 30.8 square miles. The watershed is mostly undeveloped at this time. The Denver International Airport reach is being studied separately by the City and County of Denver and is not included in this study.

Hydrologic analyses were prepared using the Colorado Urban Hydrograph Procedure (CUHP 2005, v1.4.4) and EPA SWMM (v5.1.010). Hydraulic analyses were carried out using the U.S. Army Corps of Engineers River Analysis System (HEC-RAS v. 5.0.3) based on steady flow conditions. Floodways were computed assuming 0.5’ rise criteria, which is consistent with both state and local jurisdiction regulations.

Community Response: UDFCD transmitted a letter to the CWCB dated July 26, 2021, requesting CWCB designation and approval of the subject report. No request letters were received from the other affected local governments. Conversations with staff from the partner jurisdictions indicate their desire for designation of this study.

Staff Findings: CWCB staff has determined that the subject 100-year and 500-year detailed floodplain and floodway information for the studied stream reaches is in conformance with the CWCB’s rules and regulations for floodplain designation and approval. The CWCB staff has relied on the technical competence of Matrix Design Group, who produced the study, but also performed an independent technical review of the report. CWCB staff therefore endorses this study as containing the most current floodplain mapping available and urges the affected communities to adopt said study for land use regulation purposes pursuant to statutory authority.

Requested action for Floodplain Resolution 21-723: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed floodplain and floodway information contained in said report for Third Creek and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Adams County, City of



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