



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
Watershed & Flood Protection Section

DATE: January 3, 2022

AGENDA ITEM: Consent Agenda Item 2. January 24-25, 2022 Board Meeting - Floodplain Designations

Background: Consent Agenda Item 2 includes 4 new floodplain studies that are proposed for CWCB action. Staff is requesting Board designation and approval for these items. A brief summary of these studies 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 22-724: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed and 100-year approximate floodplain information contained in said report within Adams County, Town of Bennett, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, and the City of Thornton, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Adams County, Town of Bennett, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, and the City of Thornton, and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 22-725: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed floodplain information contained in said report within Douglas County, City of Castle Pines, Town of Castle Rock, Town of Larkspur, City of Lone Tree, and Town of Parker, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Douglas County, City of Castle Pines, Town of Castle Rock, Town of Larkspur, City of Lone Tree, Town of Parker, and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 22-726: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed and 100-year approximate floodplain information contained in said report within Rio Blanco County, Town of Meeker, and Town of Rangely, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Rio Blanco County, Town of Meeker, and Town of Rangely, and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 22-727: 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 Niver Creek, Tributary L, Tributary M, and LN Split 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 Thornton, and City of Federal Heights, and FEMA. This action is recommended in order to meet statutory requirements.

Attachment - Supporting Information

Consent Agenda Item 2 - Floodplain Designations

January 2022

Summary

Consent Agenda Item 2 includes 4 floodplain studies/maps that are proposed for CWCB action. Staff is requesting Board designation and approval for these items. A brief summary of the studies 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 Designation #22-724

Affected communities: Adams County, Town of Bennett, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, and the City of Thornton.

Name of study to be formally acted on: “Flood Insurance Study, Adams County, Colorado and Incorporated Areas”, by the Federal Emergency Management Agency, December 2, 2021.

Studied streams: The report includes detailed 100-year and 500-year floodplain information for Basin 4100, Bear Gulch, Bear Gulch Tributaries, Big Dry Creek, Box Elder Creek, Box Elder Spill, Box Elder Split, Brantner Gulch, Clear Creek, Comanche Creek, Coyote Run, Grange Hall Creek, Grange Hall Creek Tributaries, Gravel Pond Split, Hayesmount Creek, Hayesmount Creek Tributaries, Larson Split, Little Comanche Creek, Little Dry Creek, Niver Creek, Niver Creek Tributary M, Northfield Creek, North Fork Grange Hall Creek, Riverdale Tributary, Sand Creek, South Fork Grange Hall Creek, South Platte River, Tanglewood Creek, and Wolf Creek.

The report includes approximate 100-year floodplain information for Bijou Creek, Brantner Gulch (portions), Brantner Gulch Tributaries, DFA 0054-1, East Bijou Creek, First Creek, Grange Hall Creek (portions), Grange Hall Creek Tributary Southeast, Hidden Lake, Kiowa Creek, Lost Creek, McKay Lake Drainageway, Morris Creek, Muddy Creek, Mustang Creek, Niver Canal, Niver Creek (portions), Northfield Creek (portions), Preble Creek, Quail Creek, Sack Creek, Second Creek, Shay Ditch, Short Run, South Fork Preble Creek, South Sack Creek, Third Creek, Todd Creek, Todd Creek Tributary 2, Todd Creek Tributary 4, Wadley North, Wadley South, and West Bijou Creek.

The subject reaches are in the South Platte watershed.

Technical Issues: The study includes all major waterways within Adams County and its incorporated communities. This restudy incorporates a number of new studied stream reaches and numerous revisions of existing studied stream reaches throughout the County.

Community response: The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with Adams County and its incorporated municipalities. One key element of the map update program is community involvement throughout the process. Prior to establishing the new study, a final coordination meeting was held on April 6, 2020 in which all affected communities were invited. The results of the countywide project, including the Zone A level hydrologic and hydraulic analyses, were presented and reviewed at the final Community Coordination (CCO) meeting attended by representatives of FEMA. The study was fully accepted and endorsed by all agencies present at this meeting.

Staff findings: The subject Flood Insurance Study revises and therefore supersedes previous versions of the County’s regulatory floodplain information. CWCB staff has determined that the



subject floodplain information for Adams County and its incorporated municipalities is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

Requested action for Floodplain Resolution 22-724: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed and 100-year approximate floodplain information contained in said report within Adams County, Town of Bennett, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, and the City of Thornton, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Adams County, Town of Bennett, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, and the City of Thornton, and FEMA. This action is recommended in order to meet statutory requirements.

Floodplain resolution number: FPR Designation #22-725

Affected communities: Douglas County, City of Castle Pines, Town of Castle Rock, Town of Larkspur, City of Lone Tree, and Town of Parker.

Name of study to be formally acted on: "Flood Insurance Study, Douglas County, Colorado and Incorporated Areas", dated December 2, 2021, by the Federal Emergency Management Agency.

Studied Streams: The report includes detailed 100-year and 500-year floodplain information for Antelope Creek, Cottonwood Creek, Big Dry Creek, Big Dry Creek - Tributary C, Cherry Creek, Daniels Park Drain, Drainageway 6600-02, Drainageway 6604-01, Drainageway 6605-01, East Plum Creek, East Willow Creek, Fourmile Creek, Hangman's Gulch, Highlands Gulch, Horse Creek, Indian Creek, Jarre Creek, Lehigh Gulch, Little Willow Creek, Louviers Gulch, Oxide Gulch, Plum Creek, Plum Creek - Diversion Channel, Rainbow Creek, Sterling Gulch, South Platte River, Trout Creek, West Creek, West Plum Creek, Willow Creek, Industrial Tributary, McMurdo Gulch, McMurdo Gulch Split Flow, Mitchell Gulch, Mitchell Gulch Tributary 2, Omni Tributary, Sellars Gulch, Sellars Gulch Tributary 2, Tributary 6400 East and Tributary 6400 West, Willow Creek (at Lone Tree), Badger Gulch, and Happy Canyon Creek.

It includes approximate 100-year floodplain information for Bear Creek, Big Dry Creek, Carpenter Creek, Cottonwood Creek, Dad Clark Gulch, East Plum Creek, Garber Creek, Glade Gulch, Happy Canyon Creek, Happy Canyon Creek Tributary, Haskins Gulch, Hunt Gulch, Indian Creek, Jackson Creek, Jarre Creek, Jordan Road Tributary, Kinney Creek, KOA Tributary, "Larkspur Butte" Tributary, Marcy Gulch, McMurdo Gulch, Mitchell Gulch, Newlin Gulch, North Gulch, Oak Gulch, Oakland School Gulch, Piney Creek, Section 34 Tributary, Sellars Gulch, South Newlin Gulch, Spring Gulch, Stark Creek, Tributary A, Tributary B, Tributary C, Tributary D, 6400 Tributary, East & West Forks, 6400 South Tributary, West Plum Creek, Willow Gulch, Dad Clark Creek, Dad Clark Gulch Tributary 1, Dad Clark Gulch Tributary 2, Dad Clark Gulch Tributary 3, Drainageway 6631, East Dad Clark Gulch, East Dad Clark Gulch Tributary 1, Fonder Draw, Kinney Creek, Marcy Gulch, Marcy Gulch Tributary 1, Marcy Gulch Tributary 2, South



Platte River, South Platte River - Unnamed Tributary 1, South Platte River - Unnamed Tributary 2, South Platte River - Unnamed Tributary 3, South Platte River - Unnamed Tributary 4, Spring Gulch.

The subject reaches are in the South Platte watershed.

Technical Issues: The study includes all major waterways within Douglas County and its incorporated communities. This restudy incorporates a number of new studied stream reaches and numerous revisions of existing studied stream reaches throughout the County.

Community response: The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with Douglas County and its affected incorporated municipalities. One key element of the map update program is community involvement throughout the process. Prior to establishing the new study, a final coordination meeting was held on April 6, 2020, to which all affected entities were invited. The results of the revision project were presented and reviewed at the final Community Coordination (CCO) meeting, attended by representatives of FEMA. The study was fully accepted and endorsed by all agencies present at this meeting.

Staff findings: The subject Flood Insurance Study revises and therefore supersedes previous versions of the County's regulatory floodplain information in the communities listed above. CWCB staff has determined that the subject floodplain information for Douglas County and its affected incorporated municipalities is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

Requested action for Floodplain Resolution 22-725: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed floodplain information contained in said report within Douglas County, City of Castle Pines, Town of Castle Rock, Town of Larkspur, City of Lone Tree, and Town of Parker, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Douglas County, City of Castle Pines, Town of Castle Rock, Town of Larkspur, City of Lone Tree, Town of Parker, and FEMA. This action is recommended in order to meet statutory requirements.

Floodplain resolution number: FPR Designation #22-726

Affected communities: Rio Blanco County, Town of Meeker, and Town of Rangely.

Name of study to be formally acted on: "Flood Insurance Study, Rio Blanco County, Colorado and Incorporated Areas", by the Federal Emergency Management Agency, December 2, 2021"

Studied streams: The report includes detailed 100-year and 500-year floodplain information for Coal Mine Draw, College Canyon Draw, Curtis Creek (Confluence with White River), North Elk Creek (Confluence with White River), North Elk Creek (Approximately 0.47 miles upstream of Access Road), North Elk Creek (Approximately 0.02 miles upstream of Confluence with North



Elk Creek Ranch Split), North Elk Creek Ranch Split, Sulphur Creek (Confluence with White River), White River (End of approximate study), White River (Upstream of County Road 54), and White River - Rangely Split (Table 2).

It includes approximate 100-year floodplain information for Big Beaver Creek, Cave Gulch, Coal Creek, Curtis Creek (Upstream Curtis Creek detailed study), Devils Hole Gulch, Douglas Creek, Dry Creek, East Flag Creek, East Miller Creek, Fawn Creek, Flag Creek, Fourmile Gulch, Little Beaver Creek, Marvine Creek, Miller Creek, Nate Spring Draw, Nate Spring Draw Tributary, North Elk Creek (Upstream of detailed study), North Fork White River, Oyler Gulch, Piceance Creek, Sheep Creek, South Fork White River, Stinking Water Creek, Strawberry Creek, Strawberry Creek Tributary, Sulphur Creek (Upstream of detailed study), Ute Creek, White River (Confluence with Green River), White River (Limit of detailed study), and White River (Approximately 90 feet downstream of County Road 10) (Table 3).

The subject reaches are in Yampa-White and Colorado basins.

Technical Issues: This study includes all major waterways within Rio Blanco County and its incorporated communities. This restudy incorporates a number of new studied stream reaches and numerous revisions of existing studied stream reaches throughout the County. A number of Letters of Map Change were also incorporated.

Community response: The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with Rio Blanco County and its incorporated municipalities. One key element of the map update program is community involvement throughout the process. Prior to establishing the new study, a final coordination meeting was held on April 16, 2020 in which all affected communities were invited. The results of the countywide project, including the Zone A level hydrologic and hydraulic analyses, were presented and reviewed at the final Community Coordination (CCO) meeting attended by representatives of FEMA. The study was fully accepted and endorsed by all agencies present at this meeting.

Staff findings: The subject Flood Insurance Study revises and therefore supersedes previous versions of the County's regulatory floodplain information. CWCB staff has determined that the subject floodplain information for Rio Blanco County and its incorporated municipalities is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

Requested action for Floodplain Resolution 22-726: Staff recommends that the Board: 1) designate and approve the 100-year and 500-year detailed and 100-year approximate floodplain information contained in said report within Rio Blanco County, Town of Meeker, and Town of Rangely, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Rio Blanco County, Town of Meeker, and Town of Rangely, and FEMA. This action is recommended in order to meet statutory requirements.



Floodplain resolution number: FPR Designation #22-727

Affected communities: City of Thornton, City of Federal Heights, Adams County

Name of study to be formally acted on: “Flood Hazard Area Delineation, Niver Creek, Tributary L, and Tributary M”, by Jacobs Engineering Group, dated August 2021.

Studied streams: This report includes detailed 100-year and 500-year hydrologic and hydraulic information for Niver Creek, Tributary L, Tributary M, and LN Split. The studied streams are 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 (MHFD)) under joint sponsorship with Adams County, City of Thornton, and City of Federal Heights. The purpose of this report is to provide updated hydrologic and hydraulic information for the Niver Creek watershed and its tributaries. The total watershed drains an area of 6.7 square miles.

Hydrologic analyses were prepared using the Colorado Urban Hydrograph Procedure (CUHP 2016, v1.5.2b) and EPA SWMM (v5.1). Hydraulic analyses were carried out using the U.S. Army Corps of Engineers River Analysis System (HEC-RAS v. 5.0.7) based on steady flow conditions. Floodways were computed assuming 0.5’ rise criteria, which is consistent with both state and local jurisdiction regulations. A portion of the flow in Lower Niver Creek is no longer contained within the channel and breaks free from the main channel (identified as LN Split).

Community Response: MHFD transmitted a letter to the CWCB dated November 5, 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 Jacobs Engineering 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 22-727: 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 Niver Creek, Tributary L, Tributary M, and LN Split 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 Thornton, and City of Federal Heights, and FEMA. This action is recommended in order to meet statutory requirements.

