



**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  
Watershed & Flood Protection Section

**DATE:** November 5, 2020

**AGENDA ITEM:** Consent Agenda Item 2. November 18-19, 2020 Board Meeting - Floodplain Designations

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**Background:** Consent Agenda Item 2 includes 3 new floodplain studies that are proposed for CWCB action. Staff is requesting Board designation and approval for these items. 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 20-710:** 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 Arapahoe County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Arapahoe County, City of Aurora, City of Centennial, City of Cherry Hills Village, Town of Columbine Valley, City of Englewood, Town of Foxfield, City of Glendale, City of Greenwood Village, City of Littleton, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution 20-711:** 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 the City and County Denver, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, City and County of Denver, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution 20-712:** 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 Douglas County, Town of Parker, City of Castle Pines,

City of Lone Tree, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile high Flood District, Douglas County, Town Parker, City of Castle Pines, City of Lone Tree, and FEMA. This action is recommended in order to meet statutory requirements.

## Attachment - Supporting Information

### *Consent Agenda Item 2 - Floodplain Designations*

*November 2020*

#### Summary

Consent Agenda Item 2 includes 3 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 #20-710

**Affected communities:** Arapahoe County, City of Aurora, City of Centennial, City of Cherry Hills Village, Town of Columbine Valley, City of Englewood, City of Glendale, City of Greenwood Village, City of Littleton

**Name of study to be formally acted on:** "Flood Insurance Study, Arapahoe County, Colorado and Incorporated Areas" dated September 4, 2020 by the Federal Emergency Management Agency.

**Studied streams:** The report includes detailed 100-year and 500-year floodplain information for Antelope Creek, Baranmor Creek, Bear Creek, Bear Gulch, Big Dry Creek, Big Dry Creek Tributary A, Blackmer Gulch, Box Elder Creek, Box Elder Spill 3, 4, & 5; Box Elder Split 2, 2A, & 2B; Cardboard Draw, Cherry Creek, Cherry Creek Spillway Drain, Coal Creek, Coon Creek, Cottonwood Creek, Coyote Run, East Toll Gate Creek, First Creek, Goldsmith Gulch, Granby Ditch, Greenwood Gulch, Happy Canyon Creek, Lee Gulch, Littles Creek, Little Dry Creek, Murphy Creek, Muskrat Run, Piney Creek, Prairie Dog Draw, Prentice Gulch, Quincy Gulch, Rat Run, Sable Ditch Sand Creek, Slaughterhouse Gulch, SJCD 6100, SJCD 6200, South Platte River, South Tributary, Spring Creek, Unnamed Creek West Toll Gate Creek, West Toll Gate Creek Tributary, West Tributary to Goldsmith Gulch, Westerly Creek, Westerly Creek Overflow, Willow Creek, Wolf Creek, Wolf Creek Tributary, and Woodrat Gulch. It includes approximate 100-year floodplain information for Box Elder Creek upper reaches, Coal Creek upper reaches, Comanche Creek, Drainageway D in Columbine Valley, East Bijou Creek, Columbia Creek, Deer Trail Creek, Green Acres Tributary, First Creek, Kiowa Creek, Little Comanche Creek, Middle Bijou Creek, Muddy Creek, Upper reaches of Piney Creek, Senac Creek, Side Creek, Unnamed Tributary to Coal Creek, West Bijou Creek, West Box Elder Creek, West Toll Gate Creek, West Toll Gate Creek Tributary, and Wolf Creek.

**Technical Issues:** The study includes all major waterways within Arapahoe 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 Revisions 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 Arapahoe 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 July 28, 2016 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 Arapahoe 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 20-710:** 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 Arapahoe County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Arapahoe County, City of Aurora, City of Centennial, City of Cherry Hills Village, Town of Columbine Valley, City of Englewood, Town of Foxfield, City of Glendale, City of Greenwood Village, City of Littleton, and FEMA. This action is recommended in order to meet statutory requirements.

**Floodplain resolution number: FPR Designation #20-711**

**Affected communities:** City and County of Denver

**Name of study to be formally acted on:** "Flood Insurance Study, City and County of Denver, Colorado", by the Federal Emergency Management Agency, dated September 4, 2020

**Studied streams:** The report includes detailed 100-year and 500-year floodplain information for Bear Creek, Box Elder Creek, Clear Creek, Cherry Creek, Coon Creek, Dakota Avenue Tributary, Dry Gulch (Harvard Gulch Tributary), Dry Gulch (Lakewood Gulch Tributary), First Creek, First Creek Tributary T, Goldsmith Gulch, Harvard Gulch, Harvard Gulch Overflow, Lakewood Gulch, Sand Creek, Sand Creek Overflow, Sand Creek Smith Road Overflow, Sanderson Gulch, South Platte River, Southmoor Park Tributary, Weir Gulch, West Harvard Gulch, and Westerly Creek. It includes approximate 100-year floodplain information for Sloans Lake Basin. The subject reaches are in the South Platte watershed.

**Technical Issues:** The study includes all major waterways within City and County of Denver. 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 Revisions 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 City and County of Denver. 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 July 28, 2016 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 the City and County of Denver is in conformance with the CWCB’s rules and regulations for floodplain designation and approval.

**Requested action for Floodplain Resolution 20-711:** 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 the City and County Denver, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, City and County of Denver, and FEMA. This action is recommended in order to meet statutory requirements.

**Floodplain resolution number: FPR #20-712**

**Affected communities:** Douglas County, Town of Parker, City of Castle Pines, City of Lone Tree

**Name of study to be formally acted on:** “Flood Insurance Study, Douglas County, Colorado and Incorporated Areas”, by the Federal Emergency Management Agency, September 4, 2020

**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:** This 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. A number of Letters of Map Revision 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 Douglas 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 July 28, 2016 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 Douglas 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 20-712:** 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 Douglas County, Town of Parker, City of Castle Pines, City of Lone Tree, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile high Flood District, Douglas County, Town Parker, City of Castle Pines, City of Lone Tree, and FEMA. This action is recommended in order to meet statutory requirements.

