



**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 8, 2019

**AGENDA ITEM:** Consent Agenda Item 2. November 20-21, 2019 Board Meeting - Floodplain Designations

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**Background:** Consent Agenda Item 3 includes 7 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 19-703:** Staff recommends that the Board: 1) designate and approve the detailed 100-year and 500-year information and 100-year approximate floodplain information contained in said report within Chaffee County, City of Salida, Town of Buena Vista and Town of Poncha Springs, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Chaffee County, City of Salida, Town of Buena Vista, Town of Poncha Springs, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution 19-704:** Staff recommends that the Board: 1) designate and approve the detailed 100-year and 500-year detailed floodplain information contained in said report within Morgan County, City of Brush, City of Fort Morgan, and Town of Wiggins, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Morgan County, City of Brush, City of Fort Morgan, and Town of Wiggins, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution FPR #19-705:** 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 of Denver, and 2) authorize staff

to prepare a floodplain resolution to be signed by the Director and transmitted to the City and County of Denver and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution 19-706:** 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, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, City of Thornton, Town of Bennett, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Adams County, City of Commerce City, City of Federal Heights, City of Northglenn, City of Thornton, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested action for Floodplain Resolution 19-707:** 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 City of Aurora, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Arapahoe County, City of Aurora, and FEMA. This action is recommended in order to meet statutory requirements.

**Requested Action for Floodplain Resolution 19-708:** Staff recommends that the Board: 1) designate and approve the 100-year and 500- detailed and 100-year approximate floodplain information contained in said report within Summit County, Town of Blue River, Town of Breckenridge, Town of Dillon, Town of Frisco, Town of Montezuma, Town of Silverthorne, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Summit County, Town of Blue River, Town of Breckenridge, Town of Dillon, Town of Frisco, Town of Montezuma, Town of Silverthorne and FEMA. This action is recommended in order to meet statutory requirements.

**Requested Action for Floodplain Resolution 19-709:** 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 El Paso County, City of Colorado Springs, City of Fountain, City of Manitou Springs, Town of Calhan, Town of Green Mountain Falls, Town of Monument, Town of Palmer Lake, and Town of Ramah, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to El Paso County, City of Colorado Springs, City of Fountain, City of Manitou Springs, Town of Calhan, Town of Green Mountain Falls, Town of Monument, Town of Palmer Lake, Town of Ramah, and FEMA. This action is recommended in order to meet statutory requirements.

## Attachment - Supporting Information

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

*November 2019*

#### Summary

Consent Agenda Item 2 includes 7 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 #19-703

**Affected communities:** Chaffee County, City of Salida, Town of Buena Vista and Town of Poncha Springs

**Name of study to be formally acted on:** "Flood Insurance Study, Chaffee County, Colorado and Incorporated Areas" dated December 7, 2017, by the Federal Emergency Management Agency.

**Studied Streams:** The report includes 100-year and 500-year detailed floodplain information for the following flooding sources: Chalk Creek, Cottonwood Creek, Poncha Creek, and South Arkansas River. The flooding sources listed in Table 1 to this memorandum were studied by approximate methods. The subject streams, detailed and approximate, are in the Arkansas River watershed.

**Technical Issues:** The study includes all major waterways within Chaffee County and its incorporated municipalities. This restudy incorporates a number of new studied stream reaches and numerous revisions of existing studied stream reaches throughout Chaffee County and its incorporated municipalities. 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 Chaffee County, City of Salida, Town of Buena Vista, and Town of Poncha Springs. 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 June 29<sup>th</sup>, 2015, to 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 this final Community Coordination (CCO) meeting attended by representatives of FEMA. All concerns raised during this meeting have been resolved. 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 the previous versions of regulatory floodplain information for Chaffee County and its incorporated municipalities. CWCB staff has determined that the subject floodplain information for Chaffee 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 19-703:** Staff recommends that the Board: 1) designate and approve the detailed 100-year and 500-year information and 100-year approximate information contained in said report within Chaffee County, City of Salida, Town of Buena Vista, and Town of Poncha Springs, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Chaffee County, City of Salida, Town of Buena Vista, Town of Poncha Springs, and FEMA. This action is recommended in order to meet statutory requirements.



**Table 1 - Streams Studied by Approximate Methods in Chaffee County FIS**

Alpine Reservoir	Poncha Creek
Arkansas River	Raspberry Gulch
Browns Creek	Sand Creek
Chalk Creek	South Arkansas River
Clear Creek	South Cottonwood Creek
Cottonwood Gulch	South Fork Lake Creek
Cottonwood Lake	Spruce Creek
Dead Horse Gulch	Squaw Creek
Eddy Creek	Sweetwater Gulch
Fourmile Creek	Threemile Creek
Gas Creek	Trout Creek
Little Cochetopa Creek	Unnamed Tributary, approx.. 3.0 river miles upstream from the confluence with Threemile Creek
Loggie Gulch	Unnamed Tributary, approx.. 0.8 river miles upstream from the confluence with Threemile Creek
Moltz Reservoir	Unnamed Tributary, approx.. 2.0 river miles upstream from the confluence with Threemile Creek, near Hecla Junction
North Fork South Arkansas River	Ute Creek
Pass Creek	

**Floodplain resolution number: FPR Designation #19-704**

**Affected communities:** Morgan County, City of Brush, City of Fort Morgan, and Town of Wiggins.

**Name of study to be formally acted on:** "Flood Insurance Study, Morgan County, Colorado and Incorporated Areas" dated April 4, 2018, by the Federal Emergency Management Agency.

**Studied streams:** The report includes 100-year and 500-year detailed floodplain information for the following flooding sources: Beaver Creek, Kiowa Creek and the South Platte River. The flooding sources listed in Addendum 2 to this memorandum were studied by approximate methods. The subject flooding sources are in the South Platte River watershed.

**Technical Issues:** The study includes all major waterways within Morgan County and its incorporated municipalities. This restudy incorporates a number of new studied stream reaches and numerous revisions of existing studied stream reaches throughout communities within Morgan County listed above. A number of Letters of Map Revisions were also incorporated.



The Kiowa Creek levee system, adjacent to the Town of Wiggins, is assumed to include the portion of Interstate 76 that stretches from the levee northeast to the extent of the Kiowa Creek 1-percent annual chance floodplain. However, the levee system has not been demonstrated by the Town of Wiggins, Morgan County, or the levee owner(s) to meet the requirements of NFIP regulations regarding its capacity to provide 1-percent annual chance flood protection. The subject areas are identified on FIRM panels (with notes and bounding lines) and in the FIS as potential areas of flood hazard data changes based on further review.

**Community response:** The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with Morgan 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 May 4<sup>th</sup>, 2016, to 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 regulatory floodplain information for Morgan County and its incorporated municipalities. CWCB staff has determined that the subject floodplain information for Morgan 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 19-704:** Staff recommends that the Board: 1) designate and approve the detailed 100-year and 500-year information floodplain information contained in said report within Morgan County, City of Brush, City of Fort Morgan, and Town of Wiggins, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Morgan County, City of Brush, City of Fort Morgan, Town of Wiggins, and FEMA. This action is recommended in order to meet statutory requirements.



**Table 2 - Streams Studied by Approximate Methods in Morgan County FIS**

Aker Draw	Jackson Lake Outlet
Allan Canyon	Kiowa Creek
Antelope Creek	Lamborn Draw
Antelope Draw	Lf Draw
Badger Creek	Middle Cottonwood Draw
Beaver Creek	Muddy Creek
Bijou Creek	Porter Canyon
Bijou No. 2 Reservoir	Potty Brown Creek
Buck Creek	Rock Creek
Coal Bank Draw	Rock Spring Draw
Cottonwood Draw	Rosener Reservoir
Cris Lee Draw	Sand Arroyo Creek
Dead Horse Draw	Schaefer Draw
East Cottonwood Draw	Shears Draw
East Prong	Sunken Lake
Greasewood Draw	Wildcat Creek
Jackson Lake	

**Floodplain resolution number: FPR #19-705**

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

**Name of study to be formally acted on:** “Flood Insurance Study, City and County of Denver, Colorado” Revised: September 14, 2018, by the Federal Emergency Management Agency.

**Studied streams:** The report includes 100-year and 500-year detailed floodplain information for the following flooding sources: Bear Creek, Clear Creek, Cherry Creek, Coon Creek, Dakota Avenue Tributary, Dry Gulch (Harvard Gulch Tributary), Dry Gulch (Lakewood Gulch Tributary), First Avenue Tributary, First Creek, First Creek Tributary T, Goldsmith Gulch, Harvard Gulch, Harvard Gulch Overflow, Lakewood Gulch, Lakewood Gulch Overflow, 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. The 100-year floodplain information for Sloans Lake Basin was prepared through approximate methods. The subject flooding sources are in the South Platte watershed.

**Technical Issues:** The study includes all major waterways within the City and County of Denver. This restudy incorporates the new studied stream reach for Box Elder Creek within the City and County of Denver, based on the Flood Hazard Area Delineation Report for Box Elder Creek (Downstream of Jewell Avenue) and Coyote Run, published by UDFCD in December 2014. The UDFCD report was incorporated into this revision of the FIS and DFIRM for portions of Box Elder Creek.





**Community response:** The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with the 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 October 5, 2016, to which all affected entities in Denver were invited. The results of the DFIRM project, including the approximate hydrologic and hydraulic analysis for Sloans Lake Basin, 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 City and County of Denver's regulatory floodplain information. CWCB staff has determined that the subject floodplain information for the City and County of Denver's is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

**Requested action for Floodplain Resolution FPR #19-705:** 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 of Denver, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the City and County of Denver, and FEMA. This action is recommended in order to meet statutory requirements.

**Floodplain resolution number: FPR Designation #19-706**

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

**Name of study to be formally acted on:** "Flood Insurance Study, Adams County, Colorado and Incorporated Areas", dated September 28, 2018, by the Federal Emergency Management Agency.

**Studied Streams:** The report includes 100-year and 500-year detailed floodplain information for the flooding sources listed in Table 3 to this memorandum. The report includes 100-year approximate floodplain information for the flooding sources, listed in Table 4 to this memorandum. The subject flooding sources are in the South Platte River watershed.

**Technical Issues:** The study includes all major waterways within Adams County and its incorporated communities. This restudy incorporates the new studied stream reaches for Box Elder Creek and Coyote Run within Adams County, based on the Flood Hazard Area Delineation Report for Box Elder Creek (Downstream of Jewell Avenue) and Coyote Run, published by UDFCD in December 2014. The UDFCD report was incorporated into this revision of the FIS and DFIRM for portions of Box Elder Creek and Coyote Run.

**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 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 October 5, 2016, 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 Adams 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 19-706:** 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, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, City of Thornton, and Town of Bennett, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Adams County, City of Brighton, City of Commerce City, City of Federal Heights, City of Northglenn, City of Thornton, Town of Bennett, and FEMA. This action is recommended in order to meet statutory requirements.

**Table 3 - Streams Studied by Detailed Methods in Adams County FIS**

Basin 4100	Grange Hall Creek Tributary
Bear Gulch	Hayesmount Creek
Bear Gulch Tributary D	Hayesmount Creek East Tributary
Bear Gulch Tributary E	Hayesmount Creek West Tributary
Bear Gulch Tributary G	Little Comanche Creek
Big Dry Creek	Little Dry Creek
Box Elder Creek	Niver Creek
Box Elder Spill 4	Niver Creek Tributary M
Box Elder Spill 5	Northfield Creek (Downstream of UPPR)
Box Elder Spill 6	Northfield Creek (Upstream of UPPR)
Box Elder Split 1	North Fork Grange Hall Creek
Box Elder Split 2	Sand Creek
Brantner Gulch	South Fork Grange Hall Creek
Clear Creek	South Platte River
Comanche Creek	Tanglewood Creek
Coyote Run	Wolf Creek
Grange Hall Creek	



**Table 4 - Streams Studied by Approximate Methods in Adams County FIS**

Bijou Creek	Preble Creek
Portions of Brantner Gulch	Quail Creek
DFA 0054-1	Sack Creek
East Bijou Creek	Second Creek
First Creek	Shay Ditch
Portions of Grange Hall Creek	Short Run
Grange Hall Tributary Southeast	South Fork Preble Creek
Hidden Lake	South Sack Creek
Kiowa Creek	Third Creek
Lost Creek	Todd Creek
McKay Lake Drainageway	Tributary 2 to Todd Creek
Morris Creek	Tributary 4 to Todd Creek
Muddy Creek	Tributary to Brantner Gulch
Mustang Creek	Tributary II to Brantner Gulch
Niver Canal	Tributary VII to Brantner Gulch
Portions of Niver Creek	Wadley North
Niver Creek Tributary L	Wadley South
Portions of Niver Creek Tributary M	West Bijou Creek
Portions of Northfield Creek	

**Floodplain resolution number: FPR Designation #19-707**

**Affected communities:** Arapahoe County, City of Aurora, City of Centennial, City of Cherry Hills Village, City of Deer Trail, City of Englewood, City of Glendale, City of Greenwood Village, City of Littleton, City of Sheridan, Town of Columbine Valley, and Town of Foxfield.

**Name of study to be formally acted on:** “Flood Insurance Study, Arapahoe County, Colorado and Incorporated Areas” dated September 28, 2018, by the Federal Emergency Management Agency.

**Studied Streams:** The report includes 100-year and 500-year detailed floodplain information for the flooding sources listed in Table 5 to this memorandum. The report includes 100-year approximate floodplain information for the flooding sources, listed in Table 6 to this memorandum. The subject flooding sources are in the South Platte River watershed.

**Technical Issues:** The study includes all major waterways within Arapahoe County and its affected incorporated communities. This restudy incorporates the new studied stream reaches for Box Elder Creek and Coyote Run within Arapahoe County and within the City of Aurora, based on the Flood Hazard Area Delineation Report for Box Elder Creek (Downstream



of Jewell Avenue) and Coyote Run, published by UDFCD in December 2014. The UDFCD report was incorporated into this revision of the FIS and DFIRM for portions of Box Elder Creek and Coyote Run.

**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, the City of Aurora, and other 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 October 5, 2016, 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 Arapahoe County, the City of Aurora and other affected incorporated municipalities is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

**Requested action for Floodplain Resolution 19-707:** 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, City of Aurora, City of Centennial, City of Cherry Hills Village, City of Deer Trail, City of Englewood, City of Glendale, City of Greenwood Village, City of Littleton, City of Sheridan, Town of Columbine Valley, and Town of Foxfield, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Arapahoe County, City of Aurora, City of Centennial, City of Cherry Hills Village, City of Deer Trail, City of Englewood, City of Glendale, City of Greenwood Village, City of Littleton, City of Sheridan, Town of Columbine Valley, Town of Foxfield, and FEMA. This action is recommended in order to meet statutory requirements.



**Table 5 - Streams Studied by Detailed Methods in Arapahoe County FIS**

Bear Creek	Murphy Creek
Bear Gulch	Muskrat Run
Big Dry Creek	Piney Creek
Big Dry Creek Tributary A	Prairie Dog Draw
Blackmer Gulch	Prentice Gulch
Box Elder Creek	Quincy Gulch
Cardboard Draw	Rat Run
Cherry Creek	Sable Ditch
Cherry Creek Spillway Drain	Sand Creek
Cherry Creek (Right Overbank Split Flow)	SJCD6100
Coal Creek	SJCD 6200
Coon Creek	Slaughterhouse Gulch
Cottonwood Creek	South Platte River
Coyote Run	South Tributary Spring Creek
East Toll Gate Creek	Toll Gate Creek
First Creek	Unnamed Creek
Goldsmith Gulch	West Toll Gate Creek
Granby Ditch	West Toll Gate Creek Tributary
Greenwood Gulch	West Tributary To Goldsmith Gulch
Happy Canyon Creek West	Westerly Creek Overflow
Lee Gulch	Willow Creek
Littles Creek	Wolf Creek
Little Dry Creek	Wolf Creek Tributary
Lone Tree Creek	Woodrat Gulch

**Table 6 - Streams Studied by Approximate Methods in Arapahoe County FIS**

Box Elder Creek	Muddy Creek
Coal Creek	Piney Creek
Columbia Creek	Senac Creek
Comanche Creek	Side Creek
Drainageway D in Columbine Valley	Unnamed Tributary to Coal Creek
East Bijou Creek	West Bijou Creek
Deer Trail Creek	West Box Elder Creek
First Creek	West Toll Gate Creek
Kiowa Creek	West Toll. Gate Creek Tributary
Little Comanche Creek	Wolf Creek
Middle Bijou Creek	



**Floodplain resolution number: FPR Designation #19-708**

**Affected communities:** Summit County, Town of Blue River, Town of Breckenridge, Town of Dillon, Town of Frisco, Town of Montezuma, and Town of Silverthorne.

**Name of study to be formally acted on:** "Flood Insurance Study, Summit County, Colorado and Incorporated Areas" dated November 16, 2018, by the Federal Emergency Management Agency.

**Studied Streams:** The report includes detailed 100-year and 500-year floodplain information for Cucumber Gulch, French Gulch, Illinois Gulch, Jones Gulch, Jug Creek, Lehman Gulch, Meadow Creek, Miners Creek, No Name Creek, North Fork Snake River, Sawmill Gulch, Snake River, Soda Creek, South Barton Gulch, Straight Creek, Swan River, Tenmile Creek, Tenmile Creek Side Channel No. 1, Tenmile Creek Side Channel No. 2, West Tenmile Creek, Willow Creek. It includes approximate 100-year floodplain information for Blue River, Snake River, Soda Creek, French Gulch, South Barton Gulch. The subject streams are in the Colorado River watershed.

**Technical Issues:** The study includes all major waterways within Summit County and its affected incorporated communities. This study combines the previously restudied stream reaches for Town of Blue River, Town of Breckenridge, Town of Frisco, Town of Silverthorne, and unincorporated Summit County. No flood hazards were identified within either the Town of Dillon or the Town of Montezuma.

**Community response:** The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with Summit 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 October 8<sup>th</sup>, 2015, to 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 regulatory floodplain information for Summit County and its incorporated municipalities. CWCB staff has determined that the subject floodplain information for Summit 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 19-708:** Staff recommends that the Board: 1) designate and approve the detailed 100-year and 500-year information floodplain information contained in said report within Summit County, Town of Blue River, Town of Breckenridge, Town of Frisco, and Town of Silverthorne, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Summit County, Town of Blue River,



Town of Breckenridge, Town of Dillon, Town of Frisco, Town of Montezuma, Town of Silverthorne, and FEMA. This action is recommended in order to meet statutory requirements.

**Floodplain resolution number: FPR Designation #19-709**

**Affected communities:** El Paso County, City of Colorado Springs, City of Fountain, City of Manitou Springs, Town of Calhan, Town of Green Mountain Falls, Town of Monument, Town of Palmer Lake, and Town of Ramah.

**Name of study to be formally acted on:** "Flood Insurance Study, El Paso County, Colorado and Incorporated Areas" dated December 12, 2018, by the Federal Emergency Management Agency.

**Studied Streams:** The report includes 100-year and 500-year detailed floodplain information for the flooding sources listed in Table 7 to this memorandum. The report includes 100-year approximate floodplain information for the flooding sources, listed in Table 7 to this memorandum. The subject flooding sources are in the Arkansas River watershed.

**Technical Issues:** The study includes all major waterways within El Paso County and its affected incorporated communities. This restudy incorporates the restudied stream reaches for Fountain Creek within Colorado Springs, Fountain Creek and Upper Fountain Creek and within El Paso County, the City of Fountain, the City of Manitou Springs and the Town of Green Mountain Falls. In addition, the restudy includes revised information for Black Squirrel Creek and several tributaries.

**Community response:** The action to designate this Flood Insurance Study was initiated by CWCB staff. This study was prepared by FEMA in cooperation with El Paso County, the City of Colorado Springs, and other 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 October 6, 2015, 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 El Paso County, the City of Colorado Springs and other affected incorporated municipalities is in conformance with the CWCB's rules and regulations for floodplain designation and approval.

**Requested action for Floodplain Resolution 19-709:** 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 El Paso County, City of Colorado Springs, City of Fountain, City of Manitou Springs, Town of Calhan, Town of Green Mountain Falls, Town of Monument, Town of Palmer Lake, and Town of Ramah, and 2) authorize staff to prepare a



floodplain resolution to be signed by the Director and transmitted to El Paso County, City of Colorado Springs, City of Fountain, City of Manitou Springs, Town of Calhan, Town of Green Mountain Falls, Town of Monument, Town of Palmer Lake, Town of Ramah, and FEMA. This action is recommended in order to meet statutory requirements.

**Table 7 - Streams Studied by Detailed Methods in El Paso County FIS**

Bear Creek	Kettle Creek
Beaver Creek	Lower Big Springs Creek
Beckers Lane Tributary	Lower Big Springs Creek - Right Split Flow Path
Big Valley	Mesa Basin
Black Forest Creek	Mines Subtributary to Corral Tributary
Black Forest Creek - Baptist Road Tributary	Monument Creek
Black Forest Creek -Middle Tributary	Monument Creek Tributary
Black Squirrel Creek	North Beaver Creek
Black Squirrel Creek - Haegler Basin - Sage Creek	North Channel Dry Creek
Black Squirrel Creek - Right Split Flow Path	North Fork Dry Creek
Black Squirrel Creek - Upstream of U.S. Highway 24	North Monument Creek
Black Squirrel Creek - West Fork Bennett Ranch Basin	North Pine Creek
Book Ranch Creek	Peterson Field Drainage
Butler Canyon	Pine Creek
Calhan East Tributary	Pine Creek Tributary
Calhan Fairground Tributary	Piñon Lake Tributary
Calhan Main Channel	Rockrimmon Basin
Camp Creek	Ruxton Creek
Carpenter Creek - Palmer Lake	Sand Creek
Catamount Creek	Sand Creek Center Tributary
Cheyenne Creek	Sand Creek Center Tributary Overflow
Cheyenne Run	Sand Creek East Fork
Corral Tributary	Sand Creek East Fork Subtributary
Cottonwood Creek	Sand Creek South
Crystal Creek	Sand Creek Split Flow
Crystal Creek - Split Flow Channel	Sand Creek West Fork
Dirty Woman Creek	Security Creek
Dirty Woman Creek - Lake Fork	South Shooks Run
Dirty Woman Creek - Middle Fork	South Tributary to Black Squirrel Creek
Dirty Woman Creek - North Fork	South Valley Dry Creek
Dirty Woman Creek - South Fork	Spring Creek
Douglas Creek North	Spring Creek East Fork





Douglas Creek South	Spring Run
Dry Creek	Spring Run Overflow
East Cherry Creek	Sutherland Creek
East Tributary to Black Squirrel Creek	Teachout Creek
East Tributary to Black Squirrel Creek - West Fork Bennett Ranch Basin	Telephone Exchange
Ellicott Consolidated	Telephone Exchange - Lower Split Flow Path
Ellicott - East Tributary	Telephone Exchange - Middle Split Flow Path
Ellicott - Highway Split Flow Path Downstream	Templeton Gap Floodway
Ellicott - Highway Split Flow Path Upstream	Templeton Gap - Lower Tributary
Ellicott - Left Split Flow Path	Templeton Gap - South Overflow
Ellicott - Sanborn Split Flow Path	Templeton Gap - South Tributary
Ellicott - Split Flow Path 2	Templeton Gap - Upper Tributary
Fairfax Creek	Tributary to East Cherry Creek
Fisher's Canyon	Tributary to Sand Creek - East Fork Reach No. 6
Fisher's Canyon - Above Loomis Avenue	Unnamed Tributary to Black Squirrel Creek
Fisher's Canyon - South Branch	Unnamed Tributary to Black Squirrel Creek No. 2
Fountain Creek	Unnamed Tributary to Teachout Creek
Fountain Creek - North Overflow Path	Upper East Tributary to Chico Creek
Franceville Tributary - Jimmy Camp Creek	Upper Fountain Creek
Haegler Ranch Tributary 2	West Fork Squirrel Creek - Solberg Ranch - West Unnamed Tributary
Haegler Ranch Tributary 3	West Tributary to Black Squirrel Creek
Haegler Ranch Tributary 4	Widefield Creek
Jackson Creek	Williams Canyon
Jimmy Camp Creek	Windmill Gulch
Jimmy Camp Creek - East Tributary	Windmill Gulch - Dix Circle Overflow
Jimmy Camp Creek - Unnamed Tributary	Windmill Gulch - Grand Boulevard Overflow
Jimmy Camp Creek - West Tributary	Windmill Gulch - Libby Court Overflow
Jimmy Camp Creek - West Tributary South Overflow	

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**Table 8 - Streams Studied by Approximate Methods in El Paso County FIS**

Antelope Creek	Mustang Creek
Big Sandy Creek	North Fork Horse Creek
Big Springs Creek	Pond Creek
Black Squirrel Creek	Ramah Reservoir
Brackett Creek	Red Creek
Calhan Main Channel	Rock Creek
Chico Creek	Ruxton Creek
Crystal Creek	Sand Creek East Fork
East Branch Brackett Creek	Sand Creek South
East Cherry Creek	Smith Creek
Geick Ranch Tributary 1	Snipe Creek
Geick Ranch Tributary 2	Steels Fork
Geick Ranch West Tributary	Turkey Creek
Hay Creek	Unnamed Tributary to Black Squirrel Creek
Horse Creek	Unnamed Tributary to Black Squirrel Creek No. 2
Jimmy Camp Creek	Upper East Tributary to Chico Creek
Kiowa Creek	West Bijou Creek
Little Fountain Creek	West Cherry Creek
Little Horse Creek	West Fork Squirrel Creek - Solberg Ranch - West Unnamed Tributary
Little Turkey Creek	West Kiowa Creek
Mines Subtributary to Corral Tributary	Williams Creek

