



COLORADO
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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: May 6, 2021

AGENDA ITEM: Consent Agenda Item 3. May 19-20, 2021 Board Meeting - Floodplain Designations

Background: Consent Agenda Item 3 includes 5 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 21-717: 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 Logan County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Logan County, City of Sterling, Town of Crook, Town of Iliff, Town of Merino and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 21-718: 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 Morgan County and its incorporated municipalities, 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.

Requested action for Floodplain Resolution 21-719: 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 Sedgwick County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted

to the Town of Julesburg, Town of Ovid, Sedgwick County, Town of Sedgwick, and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 21-720: 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 Washington County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the Town of Akron, Town of Otis, Washington County, and FEMA. This action is recommended in order to meet statutory requirements.

Requested action for Floodplain Resolution 21-721: 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 Plum Creek, East Plum Creek, and West Plum Creek, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Douglas County, and FEMA. This action is recommended in order to meet statutory requirements.

Attachment - Supporting Information

Consent Agenda Item 3 - Floodplain Designations

May 2021

Summary

Consent Agenda Item 3 includes 5 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 #21-717

Affected communities: Town of Crook, Town of Iliff, Logan County (Unincorporated Areas), Town of Merino, and the City of Sterling.

Name of study to be formally acted on: “Flood Insurance Study, Logan County, Colorado and Incorporated Areas”, by the Federal Emergency Management Agency, May 4, 2021.

Studied streams: The report includes detailed 100-year and 500-year floodplain information for Pawnee Creek Overflow, Sand Creek, and South Platte River. The subject reaches are in the South Platte watershed. It includes approximate 100-year floodplain information for Byers Ditch, Cedar Creek, Corral Creek, Cottonwood Creek, Dutch Creek, Johnson Draw, Lewis Creek, LF Draw, North Branch Cedar Creek, Pawnee Creek, Pawnee Ditch, Ramsey Draw, Sevenmile Creek, Skinner Draw, Spring Canyon, Springdale Ditch, Sterling Ditch No. 1, Twentytwo Slough, West Fork Cottonwood Creek, All Zone A Tributaries. The subject reaches are in the South Platte watershed.

Technical Issues: The study includes all major waterways within Logan 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 Logan 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 28, 2019 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 Logan 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 21-717: 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 Logan County, City of Sterling, Town of Crook, Town of Iliff, Town of Merino, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Logan County, City of Sterling, Town of Crook, Town of Iliff, Town of Merino and FEMA. This action is recommended in order to meet statutory requirements.



Floodplain resolution number: FPR Designation #21-718

Affected communities: City of Brush, City of Fort Morgan, Morgan County (Unincorporated Areas), and the Town of Wiggins.

Name of study to be formally acted on: “Flood Insurance Study, Morgan County, Colorado and Incorporated Areas” dated May 18, 2021, 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, Beaver Creek Spill, South Platte River, and the South Platte River Overflow. It includes approximate 100-year floodplain information for Aker Draw, Allan Canyon, Antelope Creek, Antelope Draw, Badger Creek, Bijou Creek, Bijou No. 2 Reservoir, Buck Creek, Coal Bank Draw, Cottonwood Draw, Cris Lee Draw, Dead Horse Draw, East Cottonwood Draw, East Prong, Greasewood Draw, Jackson Lake, Jackson Lake Outlet, Kiowa Creek, Lamborn Draw, Lf Draw, Middle Cottonwood Draw, Porter Canyon, Potty Brown Creek, Rock Creek, Rock Spring Draw, Rosener Reservoir, San Arroyo Creek, Schaefer Draw, Shears Draw, Sunken Lake, and Wildcat Creek. 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.

FEMA has identified levees in this jurisdiction that have not been demonstrated by the community or levee owner to meet the requirements of 44 CFR 65.10 of the NFIP regulations as it relates to the levee’s capacity to provide 1-percent-annualchance flood protection. As such, the existing flood hazard analysis in the affected areas has been carried forward from the previously-printed effective FIRM panel(s) and the area has been clearly identified on the FIRM panel with notes and bounding lines. This has been done to inform users that a temporary mapping action has been put in place until such time as FEMA is able to initiate a new flood risk project to apply new flood hazard mapping procedures for leveed areas. These levees occur on FIRM panel(s) 08087C0552D, 08087C0555D, and 08087C0575D on the Kiowa Creek, and are identified on the FIRM panel(s) 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 August 20, 2019, 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 21-718: 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 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.

Floodplain resolution number: FPR #21-719

Affected communities: Town of Julesburg, Town of Ovid, Sedgwick County (Unincorporated Areas), and the Town of Sedgwick.

Name of study to be formally acted on: “Flood Insurance Study, Sedgwick County, Colorado and Incorporated Areas” dated May 18, 2021 by the Federal Emergency Management Agency.

Studied streams: The report includes detailed 100-year and 500-year floodplain information for the South Platte River. It includes approximate 100-year floodplain information for Cottonwood Creek. The subject reaches are in the South Platte watershed.

Technical Issues: The study includes all major waterways within Sedgwick 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 Sedgwick 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 August 18, 2019 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 Sedgwick 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 21-719: 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 Sedgwick County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the Town of Julesburg, Town of Ovid, Sedgwick County, Town of Sedgwick, and FEMA. This action is recommended in order to meet statutory requirements.

Floodplain resolution number: FPR #21-720

Affected communities: Town of Akron, Town of Otis, and Washington County (Unincorporated Areas).

Name of study to be formally acted on: “Flood Insurance Study, Washington County, Colorado and Incorporated Areas” dated May 18, 2021 by the Federal Emergency Management Agency.

Studied streams: The report includes detailed 100-year and 500-year floodplain information for the South Platte River. It includes approximate 100-year floodplain information for Unnamed Tributary 1, Unnamed Tributary 2, and Unnamed Tributary 3. The subject reaches are in the South Platte watershed.

Technical Issues: The study includes all major waterways within Washington 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 Washington 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 August 21, 2019 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 Washington 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 21-720: 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 Washington County and its incorporated municipalities, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to the Town of Akron, Town of Otis, Washington County, and FEMA. This action is recommended in order to meet statutory requirements.



Floodplain resolution number: FPR #21-721

Affected communities: City of Englewood, City of Greenwood Village, City of Centennial, City of Littleton, Arapahoe County

Name of study to be formally acted on: “Flood Hazard Area Delineation, Plum Creek, East Plum Creek, West Plum Creek”, by Enginuity Engineering Solutions, dated November 2019.

Studied streams: This report includes detailed 100-year and 500-year hydrologic and hydraulic information for Plum Creek, East Plum Creek, and West Plum Creek. 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) under joint sponsorship with Douglas County. The purpose of this report is to provide updated hydrologic and hydraulic information for the Plum Creek watershed. The project area for this study is bound 4,000 feet upstream of the UDFCD boundary line on East Plum Creek, the UDFCD boundary on West Plum Creek, with the downstream boundary being Chatfield Reservoir. The total watershed contains a drainage area of 321 square miles, a large portion of which lies outside of the hydraulic study area but was considered for hydrologic purposes. Updated hydraulic analyses and floodplain mapping is provided for 11.1 miles of Plum Creek, 3.9 miles of East Plum Creek, and 2.8 miles of West Plum Creek.

No new hydrologic data was prepared for this study. Hydrologic data previously used in the 2005 Flood Insurance Study was used. 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 April 1, 2020, 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 Enginuity, 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 21-721: 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 Plum Creek, East Plum Creek, and West Plum Creek, and 2) authorize staff to prepare a floodplain resolution to be signed by the Director and transmitted to Mile High Flood District, Douglas County, and FEMA. This action is recommended in order to meet statutory requirements.

