

Channel Migration Zone Projects

BEAVERHEAD RIVER

BIG HOLE RIVER

CLARK FORK – BITTERROOT TO HUSON

CLARK FORK – PLAINS AREA

DEEP CREEK

EAST GALLATIN RIVER

FLATHEAD RIVER - OLD STEEL BRIDGE TO FLATHEAD LAKE

GALLATIN RIVER

JEFFERSON RIVER

MADISON RIVER

MUSSELSHELL RIVER – ROUNDUP

PRICKLY PEAR AND LOWER TEN-MILE CREEKS

LOWER RUBY RIVER

RUBY – CLEAR CREEK

YELLOWSTONE RIVER

*ADDITIONAL CMZ PROJECTS ON THE BITTERROOT, CLARK FORK (MISSOULA COUNTY), AND MUSSELSHELL RIVERS ARE UNDERWAY OR RECENTLY COMPLETED AND NOT YET ON THE STATE LIBRARY.

Channel Migration Zone (CMZ) Maps

By Tiffany Lyden, Outreach Specialist - DNRC Water Resources

What is CMZ mapping?

CMZ mapping is based on the understanding that rivers are dynamic systems that move laterally over time. The intent of CMZ mapping is to identify and map those areas at risk of future channel erosion.

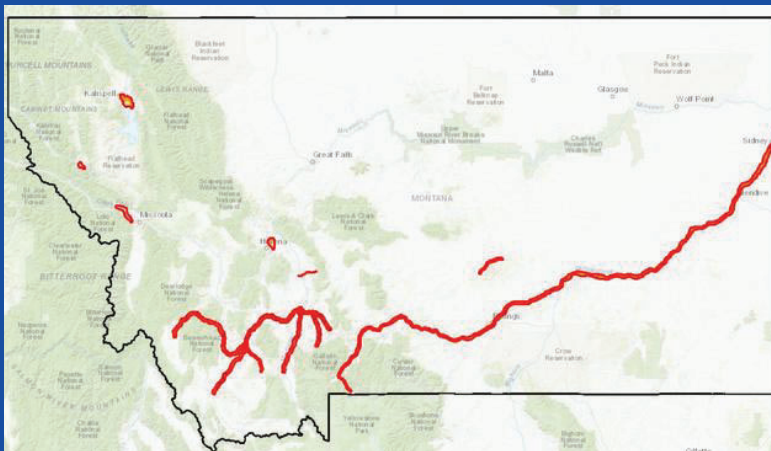
Channel Migration Zone (CMZ) maps have been produced for several rivers in Montana. Individual project reports and CMZ maps are posted on the Montana State Library's website:

https://geoinfo.msl.mt.gov/data/montana_channel_migration_zones.aspx



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GEOGRAPHIC INFORMATION CLEARINGHOUSE



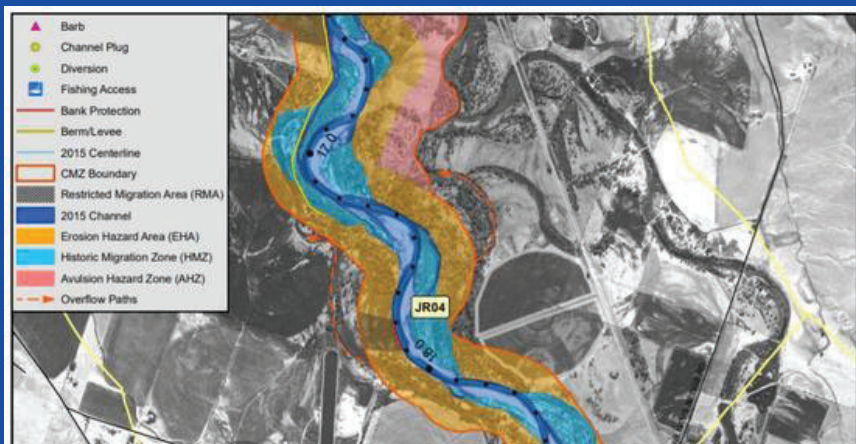
CMZ STATE MAP: AREAS WITH CHANNEL MIGRATION ZONE STUDIES AS POSTED ON MONTANA STATE LIBRARY WEBSITE

How do CMZ Maps Differ From Floodplain Maps?

CMZ mapping uses historic aerial imagery, data and mapping technologies to identify and measure where a stream channel has been in the past, to help understand and map where the channel could move in the future. Most CMZ maps identify historic migration areas, along with potential future erosion and avulsion areas anticipated over the next 100 years.

Floodplain maps show areas prone to flooding from a 1% annual chance flood event (also called a 100 year flood), based on existing topography at the time the flood study is done or the map is produced.

In Montana, local floodplain regulations apply in 100-year floodplains shown on official maps adopted by FEMA or designated by the state. CMZ maps are currently non-regulatory in Montana. However, CMZ maps can provide cost-effective and scientifically-based tools to assist land managers, conservation districts, property owners, and other stakeholders to help make sound management decisions along river corridors. CMZ maps can be very valuable educational and visual tools to show historic stream channel locations and rates of channel movement in given areas.



EXAMPLE OF A CMZ MAP

(SOURCE: JEFFERSON RIVER CMZ REPORT BY K. BOYD AND T. THATCHER)

CMZ MAPS SHOW AREAS PRONE TO EROSION.

FLOODPLAIN MAPS SHOW AREAS PRONE TO FLOODING.