



FEMA

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FAQ: What is the level of effort and required methodology for mapping Channel Migration Zones?

The Reasonable and Prudent Alternative (RPA) requires communities to identify Channel Migration Zones (CMZ) in order to correctly define the protected area. Most communities have not comprehensively mapped CMZs. Many communities have cited several reasons for this such as lack of funding and technical expertise to do such mapping at the local level. However, in addition to the standard of the RPA, state law, including the Shoreline Management Program (SMP) guidelines and the Washington Administrative Code [WAC 173-26-201(3)(c)(vii)] requires for new shoreline master programs to address the CMZ.

The CMZ is a geologically hazardous area for people and property, but it can provide great benefits to salmonids by creating complex channels and side channels when the channel is given the room to migrate. Construction within the CMZ may lead to a desire to hard armor the bank of a migrating stream as it moves towards structures or infrastructure, but the RPA and additional FEMA guidance documents require that any new development be placed so that new bank armoring and flood control structures are not necessary. Therefore, any developers should be made aware that future requests for such structures will be denied. It is important to note that the jurisdiction of the NFIP to enforce floodplain management regulations ends at the edge of the mapped SFHA. Therefore, the CMZ that extends beyond the SFHA is not required to be regulated using the NFIP requirements. Great care should still be taken when considering development in the CMZ as this is still a hazardous area to build and live. The disconnected migration areas may still provide other environmental functions that should be preserved.

A community may choose several options when addressing the CMZs for streams within their jurisdiction:

- a. Map the CMZ
- b. Declare the entire Special Flood Hazard Area (SFHA) as the CMZ (or protected area)
- c. Use the WA-DOE guidelines to determine if the CMZ is required to be mapped under the Shorelines Management Act. Steps 1a and 1b of the flowchart located on the WA-DOE website (<http://www.ecy.wa.gov/programs/sea/sma/cma/page2.html>) provide a method to determine if a reach is exempt from CMZ regulation under the SMA. If a reach is exempt from being mapped under the SMA, FEMA will accept the same conclusion.
- d. For purposes of NFIP/ESA Biological Opinion compliance, areas in the CMZ that extend beyond the SFHA may be designated as disconnected migration areas.

The specific method for identifying the CMZ is not essential as long as the best available science is used. The [WA-DOE methodology](#), Rapp and Abbe, published in 2003, is the methodology recommended in the Biological Opinion because it was NMFS understanding that this was a “readily available tool for CMZ identification and the most likely to be used by local governments in Washington State” (Landino letter to Carey, 2010). A community that wishes to use another method for developing the CMZ may do so as long as the method is scientifically defensible and sufficiently explained.

