

# Upper White River

**Channel Migration Zone (CMZ) Study** 



### **Project overview**

Starting in 2019, Pierce County will conduct a Channel Migration Zone (CMZ) Study along the Upper White River, from Greenwater to upstream of Crystal River Ranch and Crystal Village along Highway 410 in Pierce County.

The Pierce County Rivers Flood Hazard Management Plan 2018 Update recommends the completion and adoption of CMZ studies within Pierce County to better understand risk and guide development regulations along the County's rivers. The Upper White River is the last major river reach in the County to have a CMZ study done.



Late 2018 Project planning

**December 2018** Project kick-off

**Summer 2019** Field work

July 2019 – Late 2019 Data synthesis and report preparation

Results of draft CMZ study are shared with the public

Project complete, final results of the CMZ study are provided to Pierce County and shared with the public

Pierce County reviews final CMZ study and once accepted by staff the legislative process begins to adopt the study by ordinance

2020 – 2021

Fall 2020

January and May 2020

1 Project Study Area

2 Crystal River Village Community

3

3 Crystal River Ranch Community

Updated: March 2019

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## What is a Channel Migration Zone (CMZ) Study?

Channel Migration Zones (CMZs) are areas near a stream or river where the channel can be expected to move naturally over time in response to gravity and topography. Channel migration can occur steadily — such as when one stream bank erodes but sediments are deposited along the opposite bank. Or it can happen quickly, such as a flood carving a new path for a stream or river. Channel migration is an important natural process, but it can pose risks and damage or destroy homes, water and septic systems, roads, bridges, and other infrastructure. CMZ studies look at the hydraulic qualities and erosion potential of highly variable river systems to better understand the potential for harm from channel migration.

The County's project team, including technical consultant GeoEngineers, will gather physical and historical data and work closely with residents, stakeholders, and community groups to augment the data with local information, in order to analyze the potential future migration of the Upper White River. The study will be based on best available science, using the Washington State Department of Ecology's CMZ study methodology. (see <a href="https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Stream-channel-migration-zones">https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Stream-channel-migration-zones</a>)



### Why do a CMZ Study?

Understanding the potential for channel migration can help the County and its riverside communities, know and plan for different levels of risk. Identifying channel migration zones can help communities establish management practices that guide development away from the most dangerous channel migration zones and reduce flood hazards. The Upper White River CMZ study will provide a level of certainty to current and future property owners as it will identify low-risk areas, that is, areas that would not be as likely to be harmed by channel migration.

### What does the County do with the results of the CMZ study?

Once a CMZ study is done (including a full public process with the affected communities), and the channel migration and erosion hazard is mapped as severe, moderate, or low, the County adopts the study and the severe risk areas are then regulated under Pierce County's floodway codes.

### Learn more and provide feedback

We'll host numerous engagement opportunities in 2019 and 2020, including a 24/7, year-round project website, where you can learn more about the study, follow along, and provide feedback on the CMZ study.

The website will be live in late April. To access the website, visit UpperWhiteCMZ.participate.online.



#### **Contact**

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