

## GEOLOGIC JUSTIFICATIONS FOR THE DISTINCTIVENESS OF FEDERALLY SANCTIONED AMERICAN VITICULTURAL AREAS: EXAMPLES FROM THE COLUMBIA BASIN, WASHINGTON AND OREGON

The US Code of Federal Regulations defines an American Viticultural Area (AVA) as a grape-growing region with defined boundaries that has distinctive viticultural attributes that arise from distinguishing characteristics of the area within its boundaries. Petitions to establish new AVAs must include a description of the physical features of the proposed AVA affecting viticulture that make it distinctive. The code lists geology as a specific class of information relating to distinguishing features and cites “underlying formations, landforms and such geophysical events as earthquakes, eruptions, and major floods” as examples of geology-related distinctive features.

There are currently 14 approved AVAs in the Columbia Basin of eastern Washington and Oregon, one of the fastest growing viticultural areas in the US. The creation of new AVAs is inevitable as viticulture expands, and new areas with distinctive terroirs are discovered. With its dramatic landscape shaped by geologically recent volcanism, tectonics, and glacial outburst floods, geologic criteria have played, and will continue to play, a major role in defining the distinctive features of Columbia Basin AVAs.

The distinctive characteristics of The Rocks District of Milton-Freewater AVA are based on the geomorphology and depositional environment of an alluvial fan constructed by the Walla Walla River at the foot of the Blue Mountains. The boundaries of the AVA are based on the soils of the fan, which are composed largely of basalt cobblestone gravel, and its topography. Topography related to active geologic structures controls the boundaries of the proposed Candy Mountain AVA, which encompasses slopes with a southwesterly aspect on an isolated mountain created by a doubly plunging anticline of the Yakima fold belt. Candy Mountain rises above cold air that pools on valley floors and its steeper slopes are underlain by thin rocky soils that are well drained and quick to warm. The boundaries of the proposed White Bluffs AVA encircle a plateau created by erosion of Miocene and Pliocene fluvial and lacustrine sediments of the Ringold Formation. Vineyards on the plateau and its escarpment have a longer growing season than surrounding areas due to its topography, which facilitates cold air drainage.