A Geomorphic Framework for Identifying Controls on Seasonal Discharge and Stream Temperature Regimes at Multiple Scales Within the Willamette Basin.

The seasonal hydrologic regime of the Willamette River basin in Western Oregon is characterized by winter peaks and summer low flows. Low summer streamflows, in particular, place both aquatic ecosystems and human water demands at risk to changes imposed by either land use or climatic fluctuations. Our studies of the correspondence between geological setting and flow regimes demonstrate that this risk is not uniformly distributed across the landscape. Most of the available water in this region is sourced in the Cascade Mountain range, which consists of two distinct volcanic provinces, the High and Western Cascades, which differ in terms of the age and degree of dissection of the landscape. Using empirical analysis of streamflow and temperature variation, we demonstrate how this geologic/geomorphic framework can provide a basis for characterizing and predicting summer baseflow, recession behavior, and timing of response to winter recharge, as well as stream temperature at multiple scales for tributaries of the Willamette River. This analysis illustrates how geologic distinctions between the High and Western Cascades have critical implications for interpreting hydrologic flowpaths mechanisms and modeling the sensitivity of this region to environmental change.

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* Important Visa Information *

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Fall Meeting Program

The Fall Meeting provides an opportunity for researchers, teachers, students, and consultants to review the latest issues affecting the Earth, the planets, and their environments in space. This meeting will cover topics in all areas of geophysical sciences.

New Meeting Facility—Moscone West

Moscone West, the new meeting facility, is a very impressive building with all meeting levels above-ground. The facility has light and airy lobby areas, giving a more considerable open feeling than in Moscone North and South. Moscone West, located at 800 Howard Street, is one-half block west of Moscone North and South. It takes about 5 minutes to walk from the Marriott Hotel to Moscone West. The Program Committee and AGU staff are working hard to optimize the use of this new facility and are optimistic that we will have a terrific meeting in the new space.

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