

1135-K1-2376 **Martha Shott*** (shott@sonoma.edu), Rohnert Park, CA. *Predicting Extreme Rainfall Events in Sonoma County: A Service-Learning Project in Mathematical and Statistical Modeling*. Preliminary report.

Sonoma State University (SSU) is situated about 30 miles inland of the Pacific Ocean, and just east of the first mountains that atmospheric rivers encounter on their journey from the tropics up toward the Northern California coast. Depending on the precise route of these “rivers in the sky,” the region surrounding Sonoma State may be subject to periods of intense rainfall that can lead to flooding. Having any sort of lead time on such a severe storm event may allow the county to begin their flood response efforts and mitigate damage to property and agricultural land.

To this end, students and faculty in the Math and Stats department at SSU partnered with researchers at Fairfield Osborn Preserve to investigate whether rainfall measurements at the coast could predict the rainfall received on campus. This project, developed in 2014 for SSU’s Mathematical and Statistical Modeling course, has continued in subsequent iterations of the course and has led to several student presentations at university symposia. In this talk, we discuss the initial development of this service-learning project, its evolution over four semesters, the primary learning outcomes embedded into the assignments, and the students’ responses to collaborating on the project. (Received September 26, 2017)