Air Quality of Sevier Valley, a Rural High Mountain Valley

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Geographically, Utah consists of a series of valleys at the eastern edge of the Basin and Range. Richfield sits in the Sevier Valley in central Utah along the Sevier River, which runs from near Panguitch to Delta, UT. Zonal winds are generally from the west which places Richfield in a rain shadow of the Pahvant Mountain Range. Measurements of NOx, NO, NO2, O3, CO and PM 2.5 were made starting in 2016 through 2018. At two periods in 2018, measurements included the BYU GC/MS-OAM and an aethalometer. We present an overview of the general air quality and meteorological state of the Richfield area. As urban areas spread, areas of rural growth will see larger impacts from growth and urban encroachment and thus a change in air quality. In addition, back trajectories and PMF analysis were performed to understand the origin of regional pollution inputs and the source apportionment of aerosol particles.