Supplementary Information

Table SI-1. Regulatory stations and their operating agencies.

Station Name	Agency	Elevation (m)
Bakersfield-California Avenue	California Air Resources Board	119
Clovis-N Villa Avenue	San Joaquin Valley Unified APCD	113
Corcoran-Patterson Avenue	San Joaquin Valley Unified APCD	63
Fresno - Garland	California Air Resources Board	97
Hanford-S Irwin Street	San Joaquin Valley Unified APCD	82
Huron - 4th Street	San Joaquin Valley Unified APCD	118
Lebec	San Joaquin Valley Unified APCD	1069
Madera City	San Joaquin Valley Unified APCD	88
Manteca AMS	San Joaquin Valley Unified APCD	11
Merced - Coffee Road	San Joaquin Valley Unified APCD	56
Modesto-14th Street	California Air Resources Board	33
Porterville	San Joaquin Valley Unified APCD	141
San Andreas-Gold Strike Road	California Air Resources Board	300
Sequoia National Park-Ash Mountain	National Park Service (NPS)	515
Stockton-Hazelton	California Air Resources Board	10
Tracy - Airport	San Joaquin Valley Unified APCD	65
Tranquility	San Joaquin Valley Unified APCD	63
Turlock-S Minaret Street	San Joaquin Valley Unified APCD	32
Visalia	California Air Resources Board	102
Yosemite Village - Visitor Center	California Air Resources Board	1222

Table SI-2. Performance of considered sensor correction models for the collocated data.

Correction Model: **PA= Purple Air Concentrations** **PM2.5=Station Observations** **i and s1-7 are constant calculated from fitted data**	**R2**
PM2.5 = s1*PA + i	0.87
PM2.5 = s1*PA + s2*RH + i	0.89
PM2.5 = s1*PA + s2*RH + s3*T + i	0.89
PM2.5 = s1*PA + s2*RH + s3*RH*PA + i	0.90
PM2.5 = s1*PA + s2*RH + s3*T + s4*PA*RH + s5*PA*T + s6*RH*T + s7*PA*RH*T + i	0.90

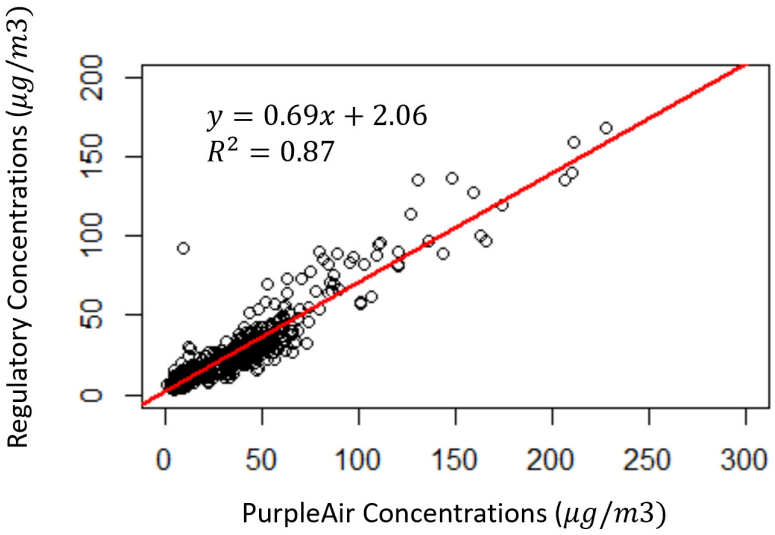
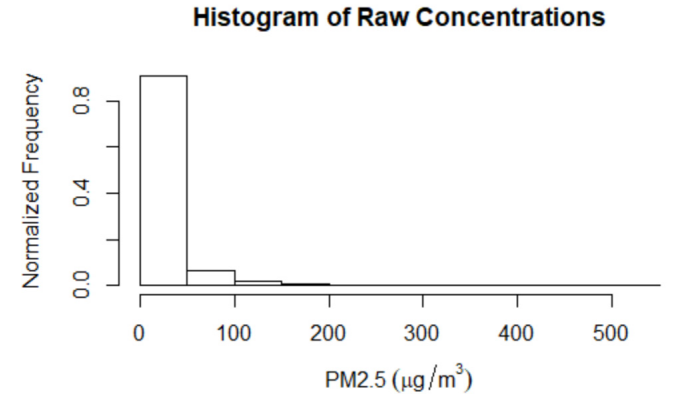
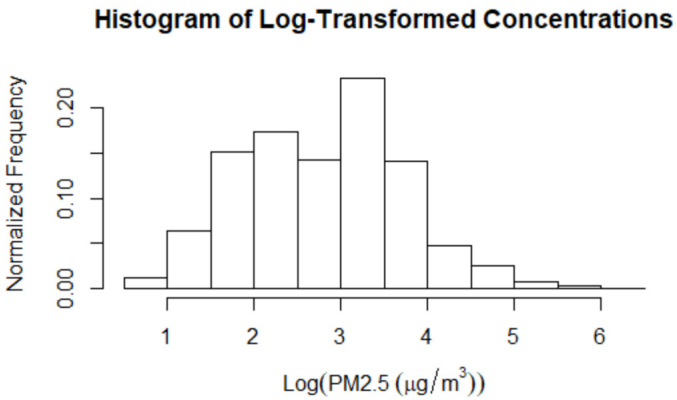


Figure SI-1. Correlation between the PM2.5 measurements by PurpleAir sensors and regulatory stations.



(**a**)



(**b**)

Figure SI-2. Histogram of raw and log-transformed concentration values.

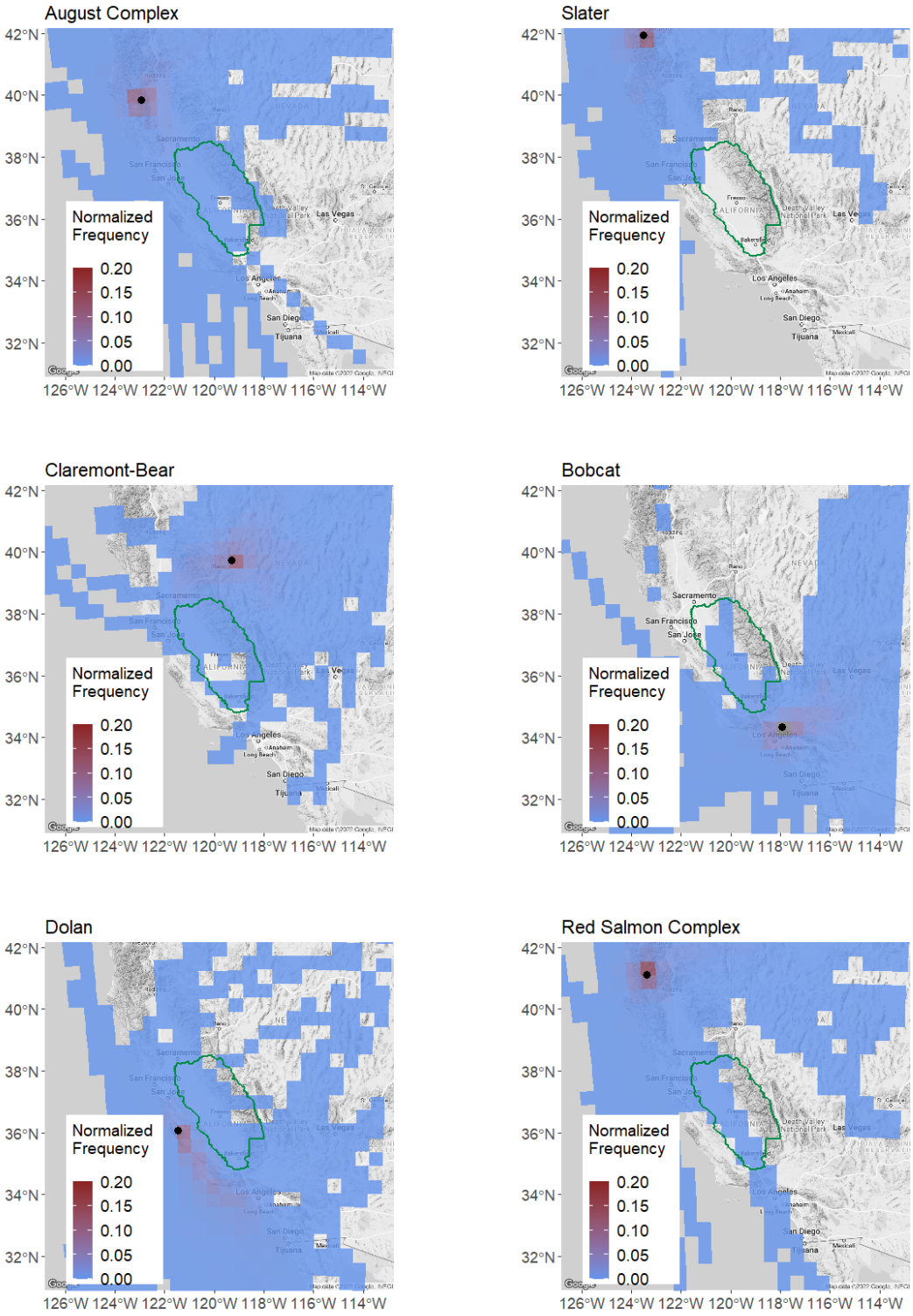


Figure SI-3. Frequency of forward trajectories starting from wildfire locations.