

Preliminary Data from Boulder Ash Removal Microclimate Study

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Research question: How is microclimate impacted by ash (*Fraxinus sp.*) removal?

Hypothesis: Air temperature will increase at the location of the removed ash trees (#100e and 101w) due to increased solar radiation and decreasing shade and evapotranspiration.

Methods: Air temperature was measured in four locations along Boulder creek (Photo 1.) from September 17-24. Removal of the adjacent ash trees #100e and 101w occurred on September 20th between 8am - 11am.



Figure 1: Photo 1. Aerial view of the study area, North of Boulder Creek, Boulder, Colorado.

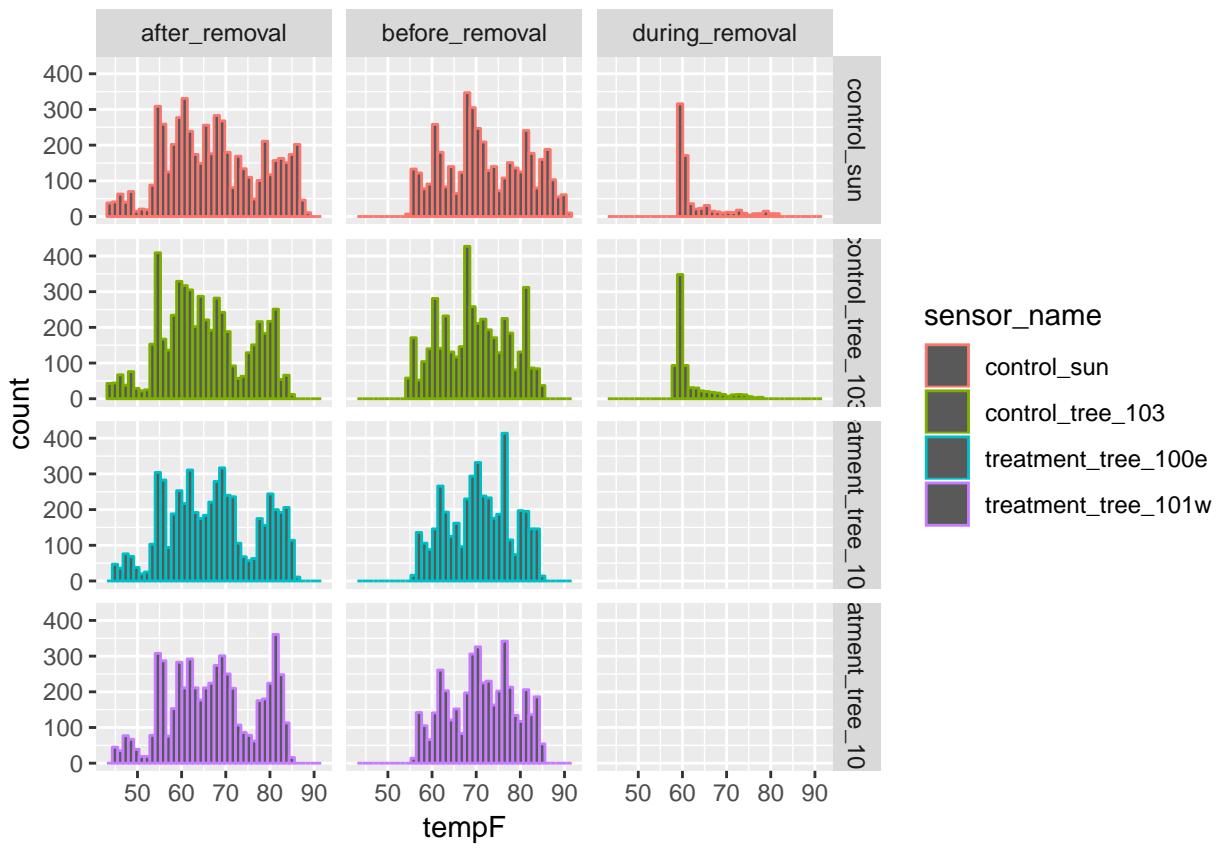


Figure 2: Figure 1. Histograms of the temperature value distributions from each sensor during each treatment phase

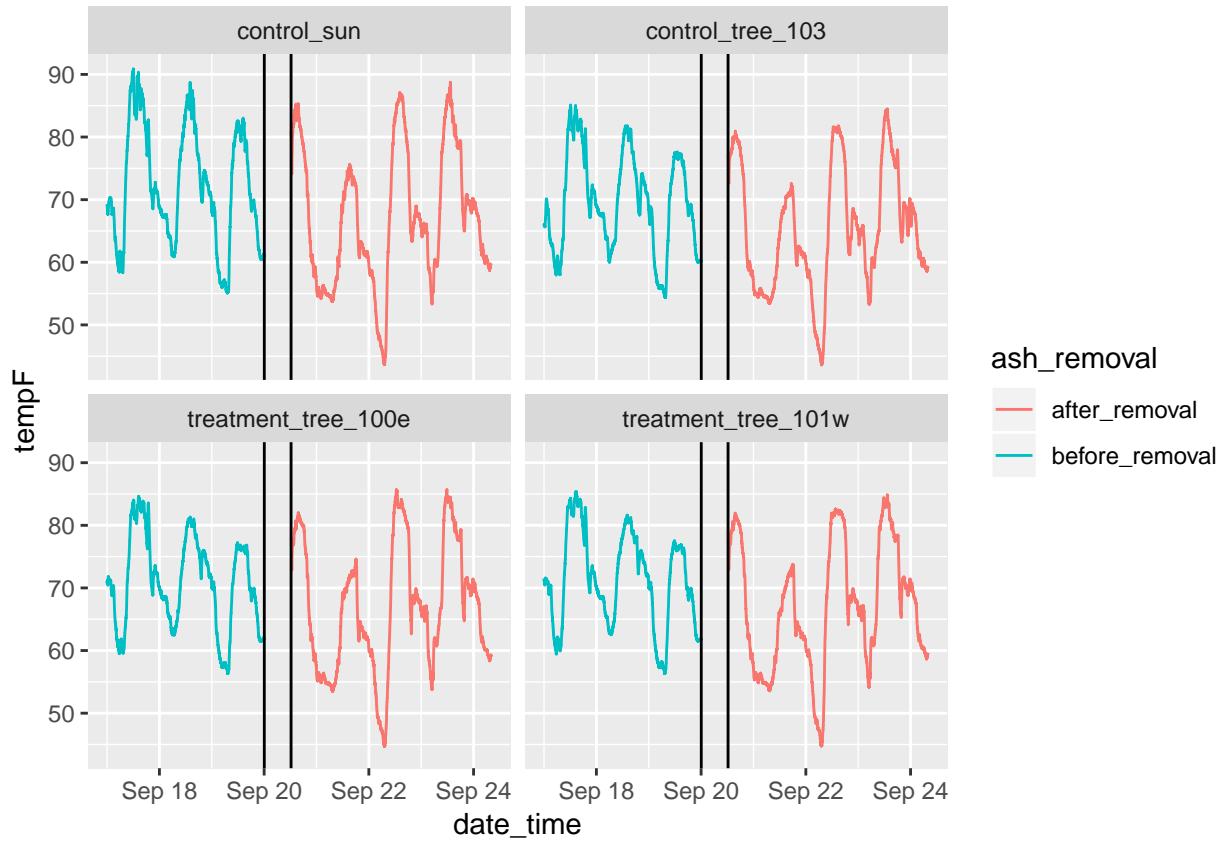


Figure 3: Figure 2. Time series plot showing control and treatment sensors over the study duration, Sept 17-Sept 24, 2018. Black vertical lines indicate time of tree removal, treatment tree sensors were not logging during this time removal time

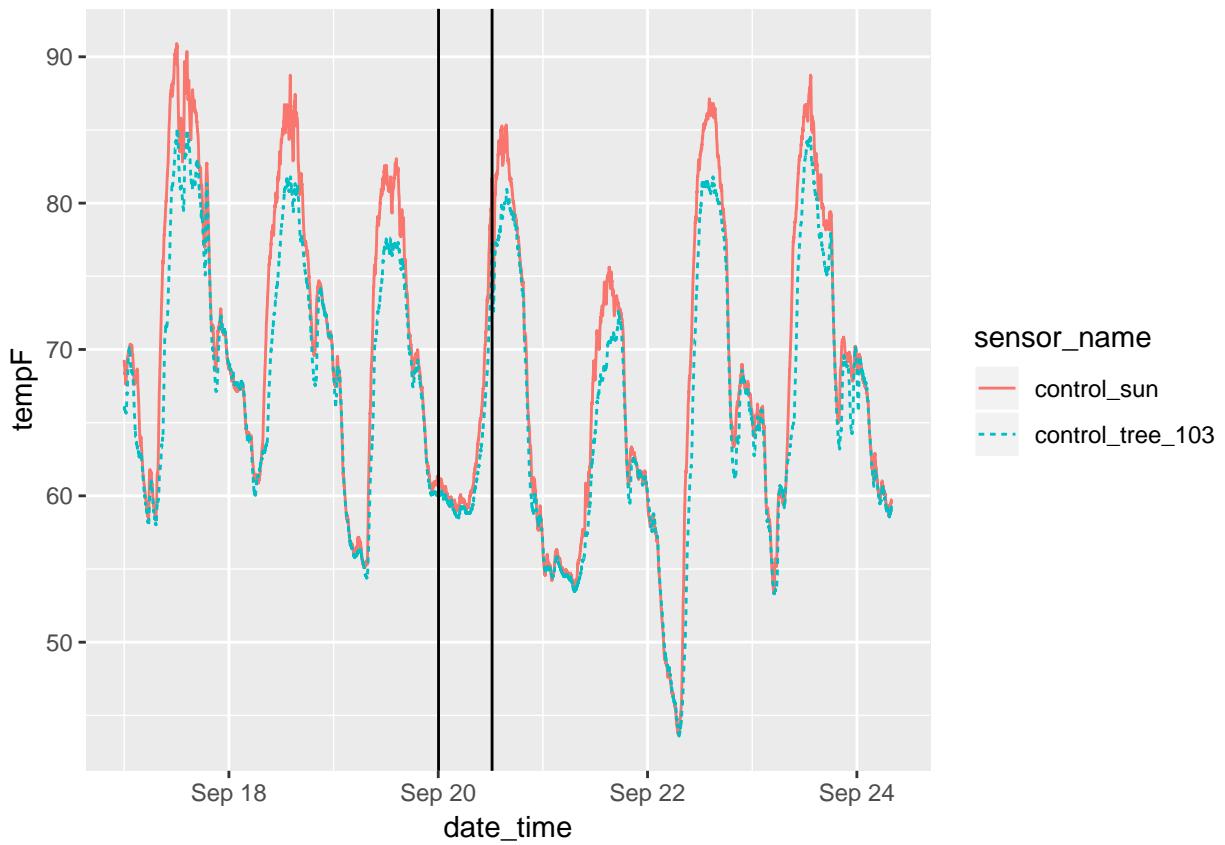


Figure 4: Time series plot showing control sensors over the study duration, Sept 17- Sept 24, 2018. Black vertical lines indicate time of tree removal, treatment tree sensors were not logging during this time removal time

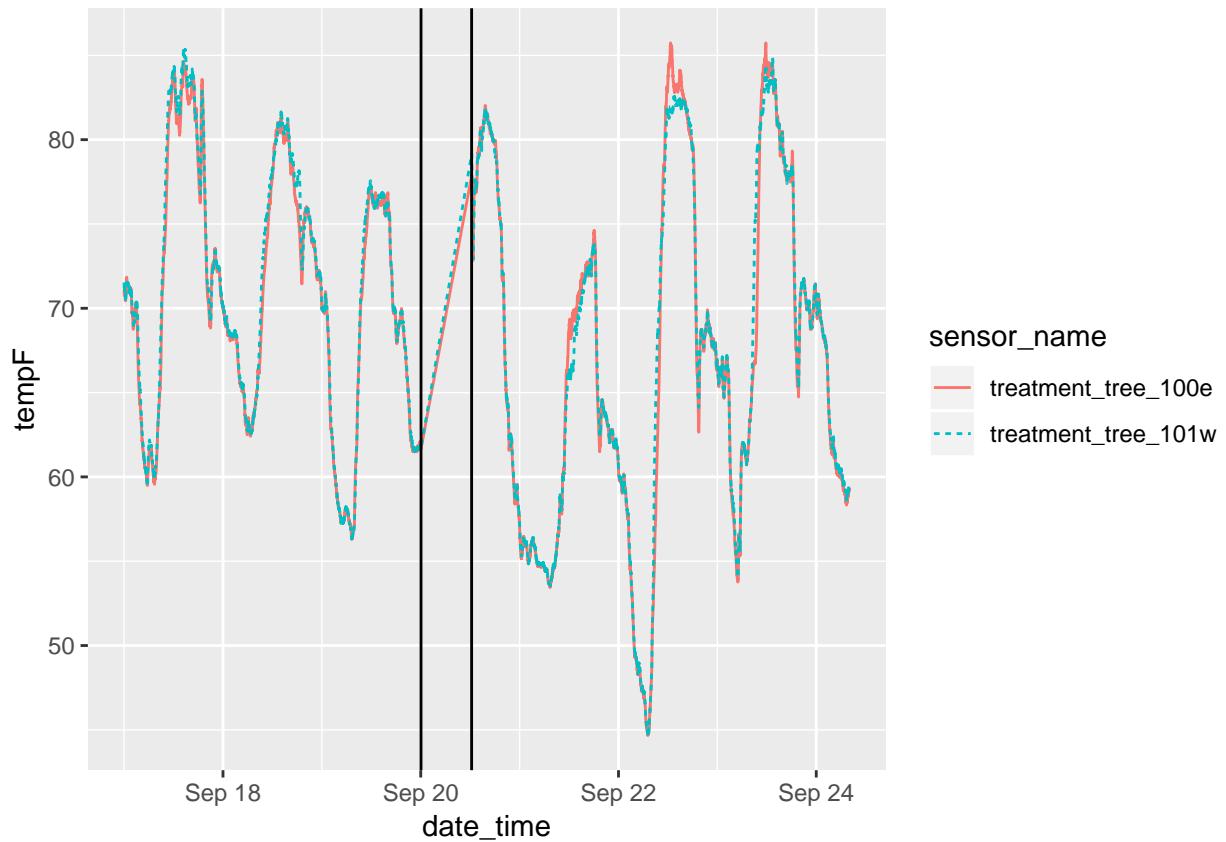


Figure 5: Figure 3. Time series plot showing individual treatment trees 100 and 101 over the study duration, Sept 17- Sept 24, 2018. Black vertical lines indicate time of tree removal, treatment tree sensors were not logging during this time removal time

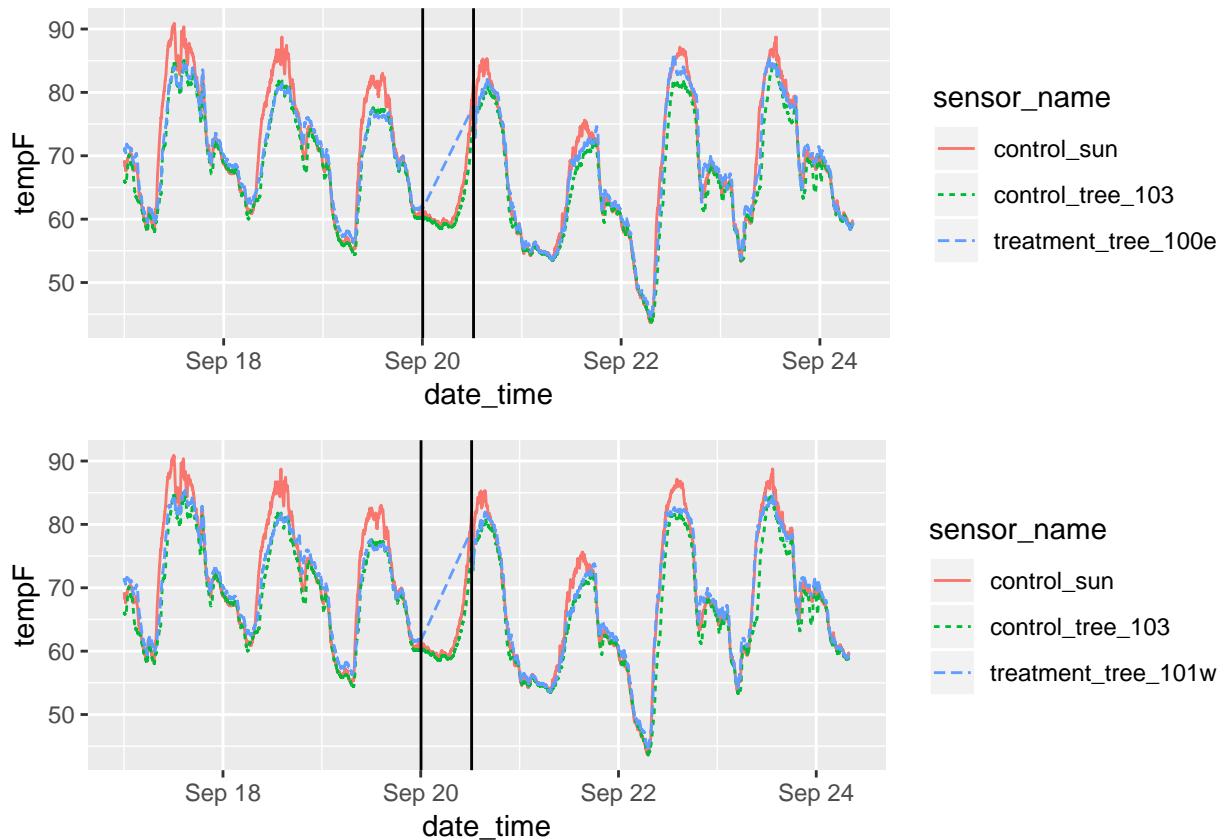


Figure 6: Figure 4. Time series plot showing individual treatment tree and control sensors over the study duration, Sept 17- Sept 24, 2018. Black vertical lines indicate time of tree removal, treatment tree sensors were not logging during this time removal time

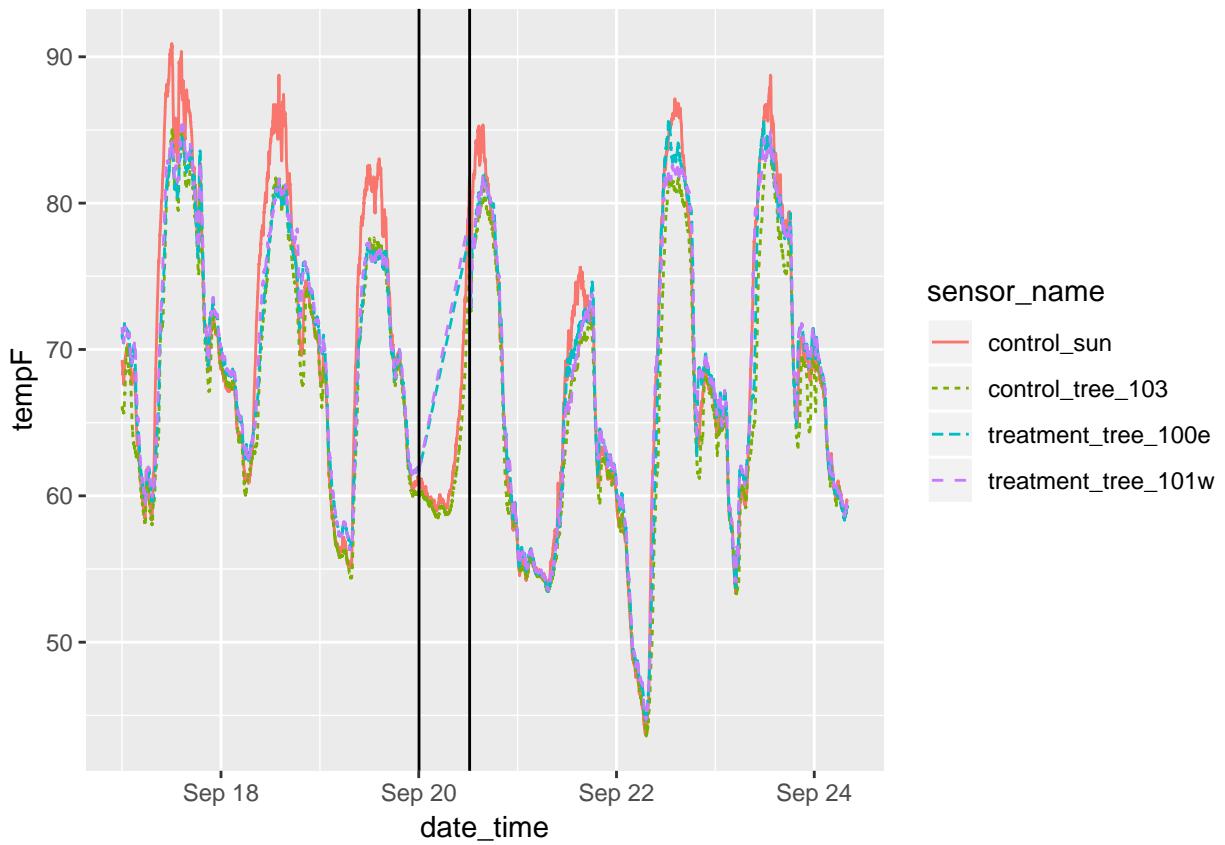


Figure 7: Figure 5. Time series plot of all 4 sensors over the study duration, Sept 17- Sept 24, 2018. Black vertical lines indicate time of tree removal, treatment tree sensors were not logging during this time removal time