



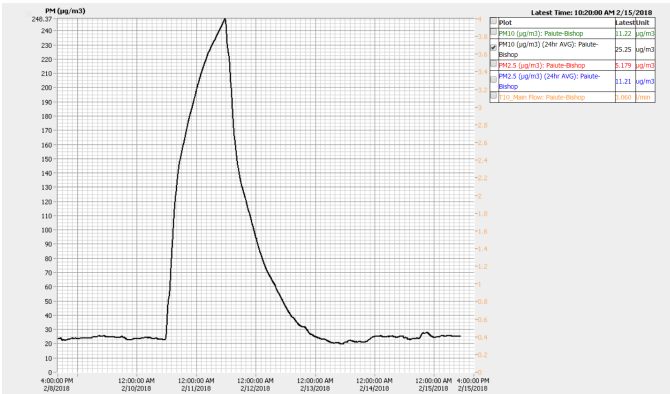
# FROM THE AIR PROGRAM

## Valentine's Dust Storm Returns?!?

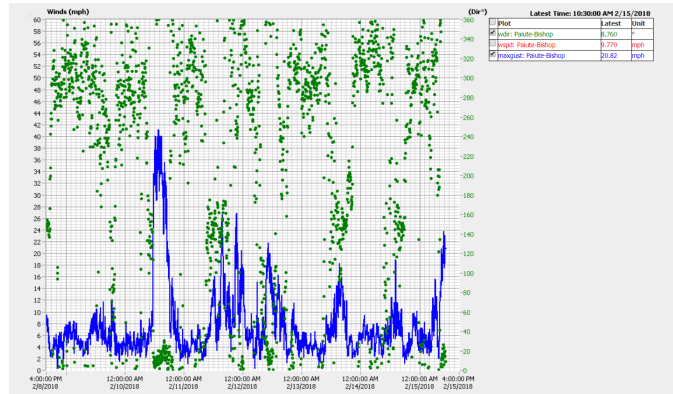
The Air program published a newsletter article in 2008 about the “Valentine Dust Storm” on February 13th, 2008 when, starting at roughly 3:00 pm, the Bishop Reservation experienced the second highest concentrations of dust recorded by the Tribal station at that time; drive by a North wind, gusting to 55 mph. (Pictures and graphs were included. It’s available at our online library at [http://www.bishoptribeemo.com/index\\_air.htm](http://www.bishoptribeemo.com/index_air.htm)) We also know that the devastating Round Fire occurred during a windstorm on February 6 2015, with ignition from windblown power lines officially estimated at roughly 2:30 pm, with the Tribe’s station measuring predominantly NW winds during the 2:00—3:00 pm hour (which swung west to south over the following several hours). Systems known as *inside sliders* are sometimes identified by NWS and other weather professionals as being storms that “slide” from the NW (jet stream), inland of the pacific northern coastal barrier. They are harder to predict than major storm systems, and bring strong winds and (typically little moisture) to eastern California. Though a comprehensive long-term study of any coinciding factors for February wind storms has not been done by the Air Program, we are interested in the recurrences.

On February 10 2018, a windstorm occurred and starting at 11 am for 10 hours, 1-hr concentrations of PM-10 were >100 ug/m3, with the highest 1-hr concentration in the 2:00—3:00 hour reaching 743 ug/m3. PM10 is dust as measured by the concentration in micrograms (ug) of particulate matter less than 10 microns per cubic meter of air (m3) (PM-10).

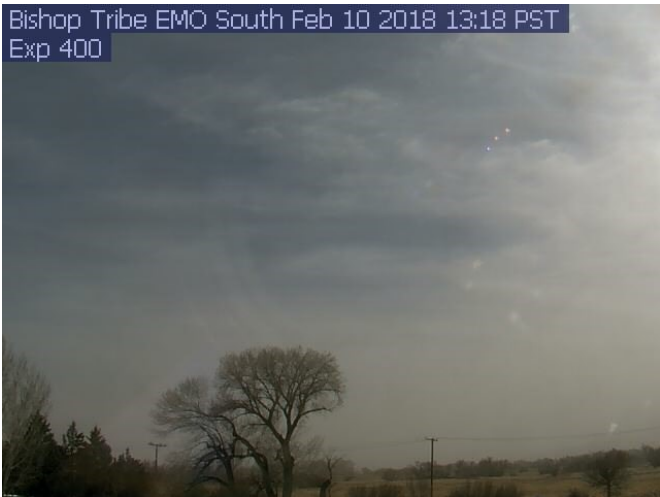
The graph to the left shows the spike in concentrations during this recent windstorm. Continuous (5-minute) wind gusts and wind directions during the same 1– week period are shown in the graph to the right. The beginning of the “shark’s fin” of dust concentrations happens midday on the 10th, and had peaked in roughly 24 hours (it was still hazy on the 11th). The high dust concentrations reduced visibility. This was captured by the Tribe’s web camera, located on the roof of the Environmental Management Office. The picture on the left is looking southeast into the Owens Valley, showing obstruction by dust at ground level at 1:20 pm. The picture on the right, taken at 2:00 pm, is looking towards the mountain skyline, west. Note that the Tungsten Hills are not visible.



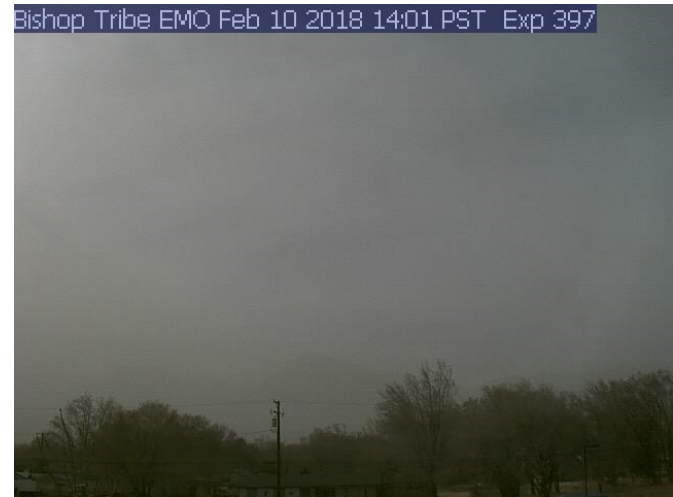
Particulate Matter February 10, 2018



Wind Gust (mph) February 10, 2018



View down valley at 1:20 PM



View of Mt Tom at 2:00 PM