FROM THE AIR PROGRAM

Fall weather patterns

During November so far, the local characteristics of the fall season, which we saw begin in early October, became more pronounced. Nighttime temperatures dropped, winds picked up, and we all felt the quickening of crisp sunny days into frigid, dark evenings. However, some of the changes are less obvious, but can be seen in the Tribe's weather station data.

Air masses: Pressure, Stability, & Smoke

Significant drops in barometric pressure became more frequent in November, due to frontal passage. Pressure is a key factor in making weather forecasts, and instrumentation for elevation changes. Also, pressure changes with air density, so it's affected by inversion layering, which is when cold, dense air forms or becomes trapped in the valley below a layer of warmer air, trapping household fire smoke with it. The season of inversion layers is on the way, but the pattern is not set up yet. We have seen the beginning of it, during the days with stable winds, with spikes in PM-2.5 (smoke) during the night, when people have fires, and early morning hours, which is when the inversion can form. The highest values reach into the "moderate" range on the Air Quality Index; however, they don't last long enough to exceed the 24-hour Tribal standard. Stability in the air is needed for this pattern to go into full effect; fronts bring winds and changes in pressure and break it up.

Fronts & Dust

Another result of storm fronts moving in, or differences in wind in air layers, is low-level wind shear. When severe, this makes it hard for planes to land and take off. It is characterized by sudden swings in wind direction, along with high gusts, anywhere from about 1000' elevation down to the ground. The weather station wind vane, which is about 32' above the ground, recorded some moderate instances of this during the 2nd and the 15th. There have been some PM-10 (dust) measurements in the "moderate and unhealthy for sensitive groups" category when recent fronts brought high winds. Again, they didn't last long enough to exceed the 24 -hour standard.

Low Humidity & fires

We have also seen humidity reach lower values since October. Humidity is important in evaluating fire fuel moisture and modeling fire danger along with winds and other factors. The fire ban has remained in effect largely due to low humidity in fuels, whereas once that is lifted, winds will be a primary factor in determining burn days.

BURN INFO

If you want to have a burn as soon as the ban is lifted, please remember to get or renew your burn permit at the EMO office and review the rules before burning. Permits expire every Dec 31st. Any time you are not sure if yours needs renewing, please call or come in. A list of rules and phone numbers are on the permit. In general:

You must have a burn permit
It must be a **"yes" burn day CALL 760 873 2555 to find out**
You can burn only from **5:00AM to noon**
You can burn

- yard waste in 4-foot by 4-foot piles
- small plots of grass or strips of grass along fence lines
- cardboard and non-glossy paper in burn barrels

You must CALL DISPATCH 760 873 5866 before burning.