**UT Willow Creek Compressor Station (Koda) TMS AQIA**

**AERMET/Meteorological Datasets**

**EPA Region 8 Meteorological Datasets**

**04/14/2025**

**AERSURFACE**

* Website: <https://www.epa.gov/scram/air-quality-dispersion-modeling-related-model-support-programs#aersurface>
* Version: 24142 (default options enabled)
* EPA’s Processed NLCD Files: <https://gaftp.epa.gov/Air/aqmg/nlcd/>
  + File: [2021\_R08\_CO-UT.zip](https://gaftp.epa.gov/Air/aqmg/nlcd/2011-2021_2021ed/2021/2021_R08_MT.zip)
  + Lat: 40.443
  + Lon: -109.513

**AERMINUTE**

* Website: https://www.epa.gov/scram/meteorological-processors-and-accessory-programs#aerminute
* Version: 15272 (default options enabled)
* 1-Minute Data for Vernal Airport (KVEL): <https://www.ncei.noaa.gov/products/land-based-station/automated-surface-weather-observing-systems>
  + Time Period: April 1, 2019 to March 31, 2024
  + Lat: 40.443
  + Lon: -109.513
  + IFW Date: 3/27/2007

**AERMET**

* Website: <https://www.epa.gov/scram/meteorological-processors-and-accessory-programs#aermet>
* Version: 24142 (default options enabled)
* NWS Surface Data for Vernal Airport (KVEL/725705/94030): <https://www.ncei.noaa.gov/pub/data/noaa/>
  + Time Period: April 1, 2019 to March 31, 2024
  + Lat: 40.443
  + Lon: -109.513
  + Elevation: 1604.9
  + Wind Height: 10.0
* Upper Sounding Data for Grand Junction/Walker Field Airport (USM00072476/69472):
* https://www.ncei.noaa.gov/data/integrated-global-radiosonde-archive/access/data-por/
  + Time Period: April 1, 2019 to March 31, 2024
  + Lat: 39.12
  + Lon: -108.525
  + Elevation: 1474.0

**Quality Assurance and Completeness Requirements:** The frequency of calm winds (defined as wind speeds less than 1.5 meter per second) should be less than 10 percent of the dataset and the completeness of the dataset should be greater than 90 percent of the dataset by quarter (see Clarification on the Use of ASOS Meteorological Data in AERMOD (3-8-2013): <https://www.epa.gov/sites/default/files/2020-10/documents/20130308_met_data_clarification_0.pdf>). The NWS ASOS datasets are available to use with NWS surface datasets to reduce the frequency of calm wind speeds and variable wind conditions. The use of ASOS can essentially improve the quality of the selected meteorological dataset. The NWS ASOS datasets should be used if available, but these datasets are not required by EPA.

**Final Meteorological Datasets and Time Period:** The datasets selected above meet the data quality assurance and completeness requirements, where the data are 99.4% complete with 1.82% calm winds frequency. Figure 1 below presents the wind rose of the available meteorological dataset.

**Figure 1. Vernal Airport (KVEL/725705/94030) from April 1, 2019 to March 31, 2024, with ASOS data.**

