

Modeled Attainment Test Results

Utah Division of Air Quality

As discussed in the previous section, we used SMAT-CE to generate a future design value (FDV) for Federal Reference Method (FRM) monitors in the Salt Lake nonattainment area. The FDV calculation methodology is provided in the EPA document: *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze*¹.

FDV's were generated for the proposed attainment year (2019), as well as the 2017 milestone year and 2020 horizon year. These FDV's represent simulated peak concentrations that are directly compared to the daily PM_{2.5} National Ambient Air Quality Standard (NAAQS, 35 µg/m³). If all 2019 FDV's are lower than the NAAQS, then we can say that we demonstrated modeled attainment of the standard. Table 1, below, shows FDV's for projected years and FRM monitor locations in the Salt Lake nonattainment area.

Monitor ID	Monitor Name	2016 Baseline DV	2017 Milestone FDV	2019 Future DV	2020 Horizon FDV
490030003	Box Elder	31.9	31.9	30.4	29.6
490110004	Bountiful	29.7	29.6	29.3	29.2
490351001	Magna	27.9	27.7	28.0	27.6
490353006	Hawthorne	34.3	34.4	33.8	33.8
490353010	Rose Park	36.3	36.2	35.9	35.6
490570002	Ogden #2	32.4	32.3	32.2	31.9

Table 1: Design values for base year and projected years. Purple numbers highlight design values greater than the NAAQS (35 µg/m³).

Modeled concentrations in northern Salt Lake County were especially unresponsive to significant projected NO_x productions. Although there was a projected decrease in modeled PM_{2.5} concentrations at all locations, UDAQ failed to model attainment at their Rose Park monitor by 2019 (and 2020). UDAQ successfully demonstrated attainment at all other monitor locations. Figure 1, below, shows the geographical location of Salt Lake FRM monitors.

¹ <https://www3.epa.gov/ttn/scram/guidance/guide/final-03-pm-rh-guidance.pdf>

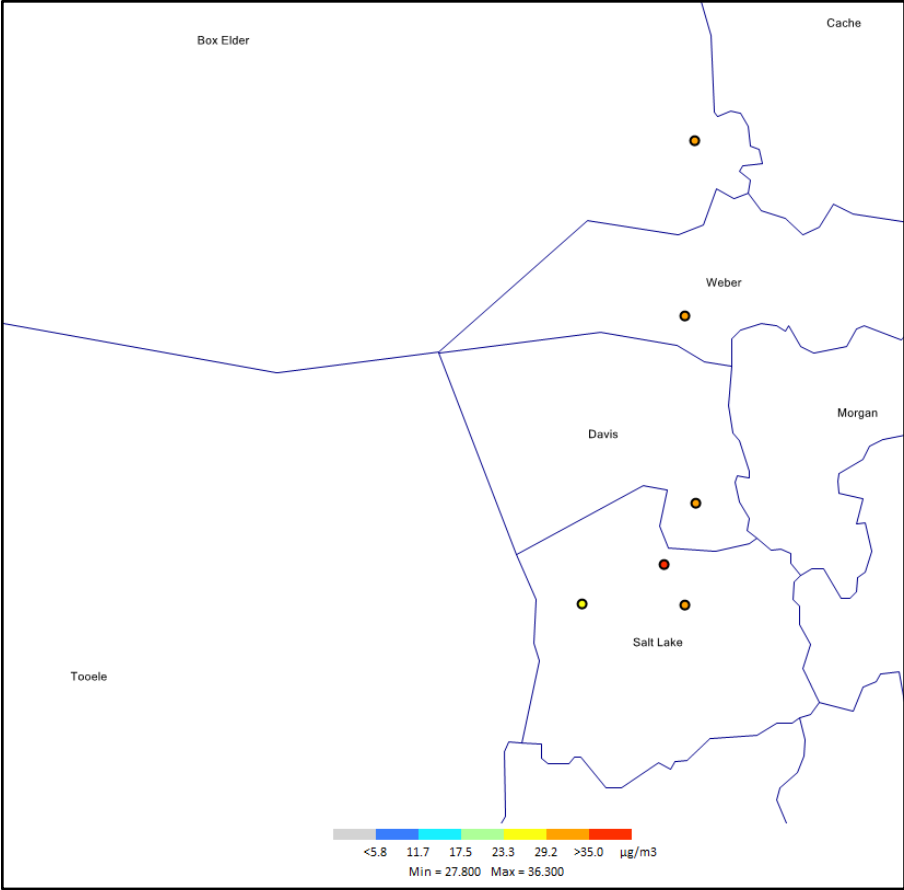


Figure 1: Dots showing geographical location of six FRM monitors in the Salt Lake nonattainment area. Dot colors indicate 2019 FDV estimate (note color scale at bottom of figure).