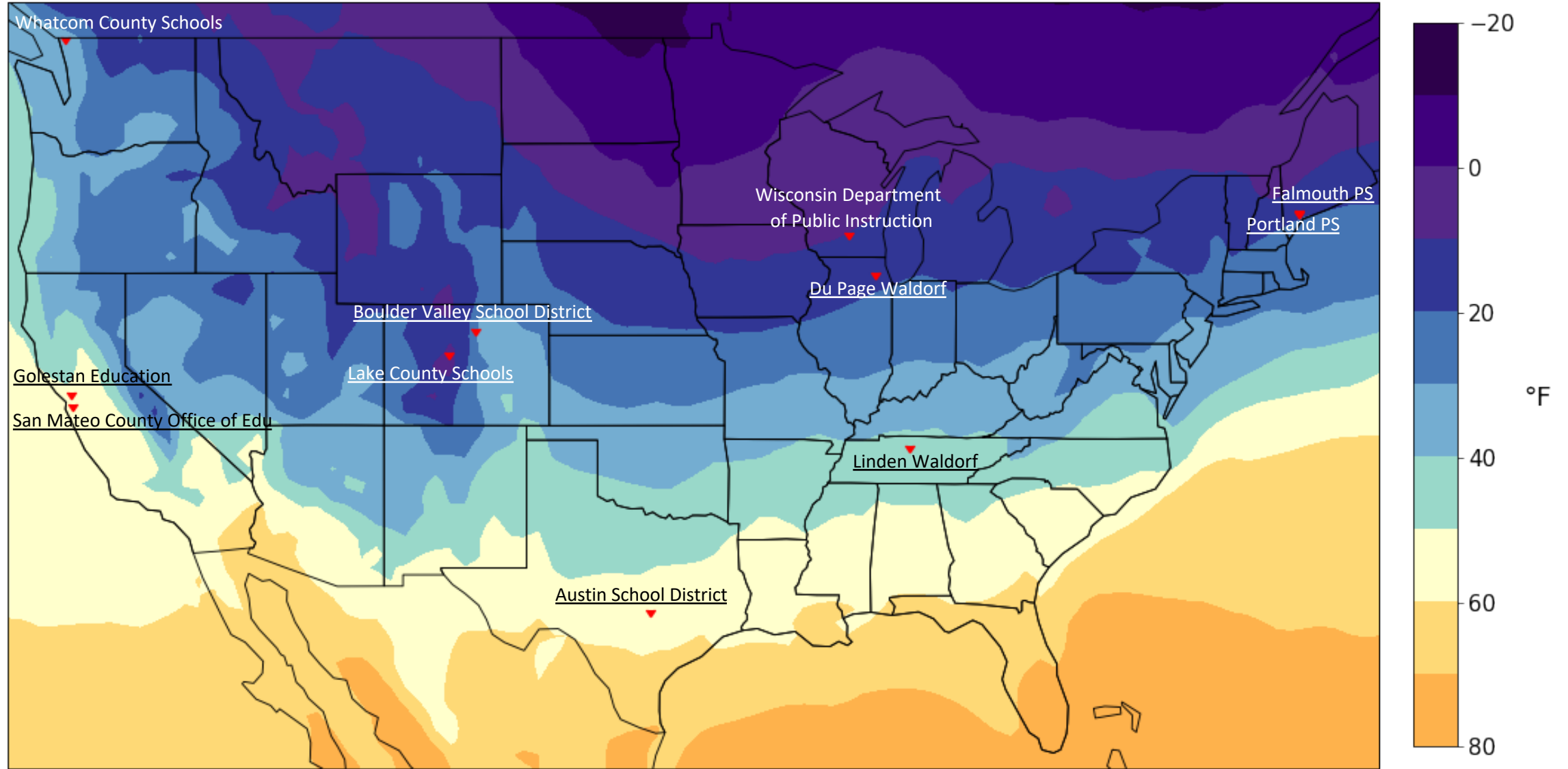Average Daily Temperature (with Wind Chill) 8:30AM-3:30PM Winter 2018-19

Mapping and information based on data from Global Modeling and Assimilation Office (GMAO), Goddard Earth Sciences Data and Information Services Center (GES DISC), Google Maps. Map created by Sarah Gill, MPP. 2021.

Winter

This is a visualization of mean air temperature at 2 meters (with wind chill where applicable) during the hours of 8:30AM to 3:30PM in local time during the astronomical winter (12-21-2018 to 03-19-2019). Data is from NASA's MERRA-2 M2T1NXSLV dataset. Time zones are approximated with longitude boundaries as follows: (Pacific Time: -125 to -114, Mountain Time: -114 to -102, Central Time: 102 to -85.5, Eastern Time: -85.5 to -65).

Here, "Winter" is defined as the astronomical winter: 12-21-2018 to 03-19-2019.
Time zones are approximated with longitude boundaries as follows:
Pacific Time: -125 to -114
Mountain Time: -114 to -102
Central Time: 102 to -85.5
Eastern Time: 85.5 to -65

Data is from NASA's Modern-Era Retrospective analysis for Research and Applications, Version 2 (MERRA-2) M2T1NXSLV dataset, an atmospheric analysis using conventional and satellite data sources with time resolution of one hour and spatial resolution of 0.5 ° x 0.625 °.

The data is broken into the four continental US time zones (as defined above) and then subset to include only the hours 8:30AM to 3:30PM in local time. Air temperature at 2 meters is used for temperature. Where temperatures are at or below 50F and windspeed at 10 meters is at or above 3mph, wind chill is applied. Wind chill is calculated using the python library MetPy. Temperatures are then averaged over the entire timespan (8:30AM-3:30PM every day from 12-21-2018 to 03-19-2019).

The filled contour map is generated from the point data using the python library matplotlib's function confourf(), binned into 10 degree Fahrenheit intervals.

The data is broken into the four continental US time zones (as defined above) and then subset to include only the hours 8:30AM to 3:30PM in local time. Air temperature at 2 meters is used for temperature. Where temperatures are at or below 50F and windspeed at 10 meters is at or above 3mph, wind chill is applied. Wind chill is calculated using the python library MetPy. Temperatures are then averaged over the entire timespan (8:30AM-3:30PM every day from 12-21-2018 to 03-19-2019).

The filled contour map is generated from the point data using the Python library Matplotlib's function "contort," pinned into 10 degree Fahrenheit intervals.

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Map created by Sarah Gill, MPP. 2021.