The Weather Research and Forecasting (WRF) model is a mesoscale numerical weather prediction system designed for atmospheric research. WRF results are frequently used as inputs for various pollutant emission and transport models. Several studies have reported the use of an optional utility program called OBSGRID within the WRF framework to increase prediction accuracy. OBSGRID performs observational nudging, which weights data points in a way that should better match the specific weather properties of the simulated events. This poster describes the process for implementing OBSGRID and related formatting steps to incorporate observational data points into meteorological inputs (NCEP) used by WRF. Research results compare predicted horizontal wind velocity and rainfall with and without observational nudging for a 2008 weather event.