



# Prognostic Meteorology

12th Modeling Conference On Air Quality Modeling

Moderated by Chris Misenis

US EPA/OAQPS/AQAD

Air Quality Modeling Group



# Background

- Prognostic meteorological data were allowed under the latest revisions to the *Guideline*
  - Preference for meteorological data inputs remains:
    - Site-Specific/Site-Representative
    - National Weather Service
    - Prognostic Meteorological Data
  - EPA has received several dispersion applications utilizing prognostic meteorological data
  - Over the course of those applications, several issues/questions/concerns have arisen. For example:
    - Blending of prognostic and meteorological data
    - Number of observation sites used in comparison
    - Determining representativeness



# Charge Questions

1. The option to use prognostic meteorological data in dispersion modeling applications was intended to open a door for modeling sources in challenging meteorological situations. For example, sources that are in complex terrain or sources with missing representative data. With respect to allowing the use of prognostic meteorological data under the *Guideline*, what has been the most significant advantage or improvement to meteorological data inputs?
2. Three-dimensional meteorological modeling has a different set of challenges when compared to compiling an observational dataset, be it either on-site monitoring or National Weather Service. Knowing there would be growing pains with a new option, what has been the most challenging aspect as it relates to the use of prognostic meteorological data in dispersion modeling applications?
3. Moving forward, advancements in computational ability and our understanding of the atmosphere will continue to grow. Thus, the ability of three-dimensional models to simulate atmospheric conditions at meso- and microscales will also improve. Outside of higher resolution datasets, what sort of improvements do you expect or would you like to see in the implementation of prognostic data in dispersion modeling applications?



## Panelists

- Ashley Mohr (EPA Region 6)
- Bart Brashers (Ramboll)
- Bret Anderson (US Forest Service)