

US EPA ARCHIVE DOCUMENT

SINGLE SOURCE AQRV ANALYSIS

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Photochemical Grid Models

FLAG 20XX?

FLAG 2010 (far-field)

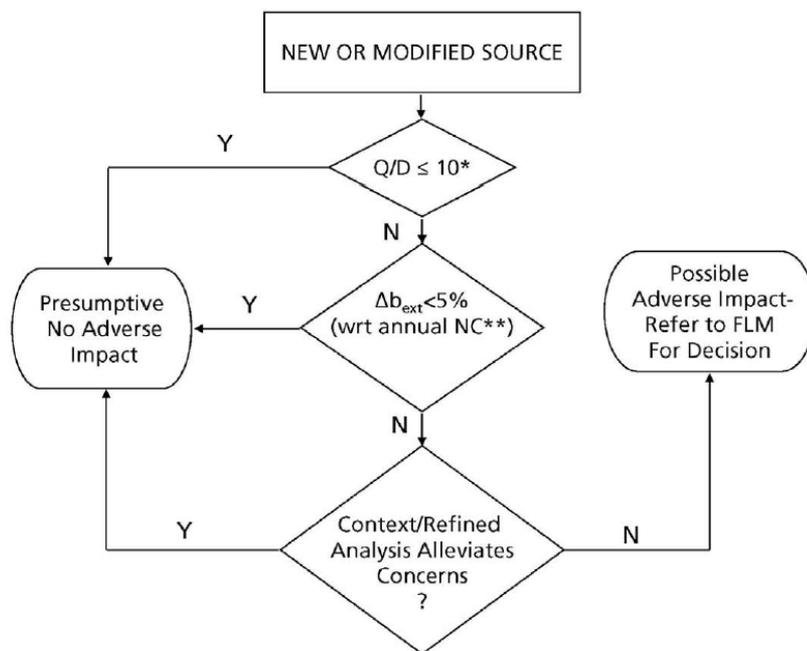


Figure 1. Procedure for Visibility Assessment for Distant/Multi-Source Applications (Revised)

*Q/D test only applies to sources located greater than 50 km from a Class I area.

**Difference Change in the 98th percentile with respect to (wrt) the annual average Natural Condition (NC). Applicant should use the 20th percentile best natural condition background if recommended by the FLM or permitting authority.

National Park Service
U.S. Department of the Interior



Natural Resource Program Center

Federal Land Managers' Air Quality Related Values Work Group (FLAG)

Phase I Report—Revised (2010)

Natural Resource Report NPS/NRPC/NRR—2010/232



Use of PGM tools for FLAG Analysis

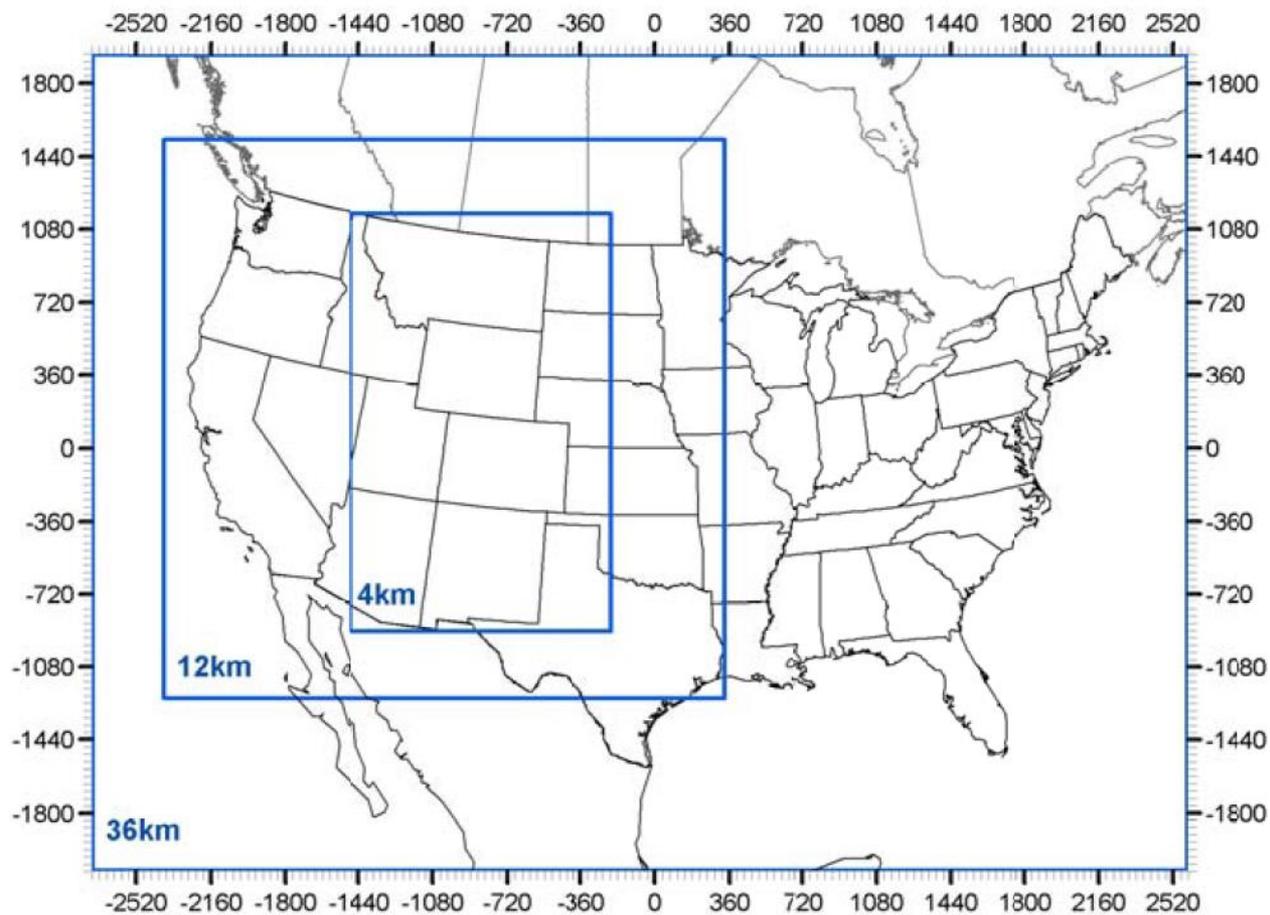
Advantages

- Less conservative
- Robust chemical conversion
- Cumulative environment
- Consistent with other AQ far-field evaluation processes
- Performance evaluation of Met and Concentration

Disadvantages

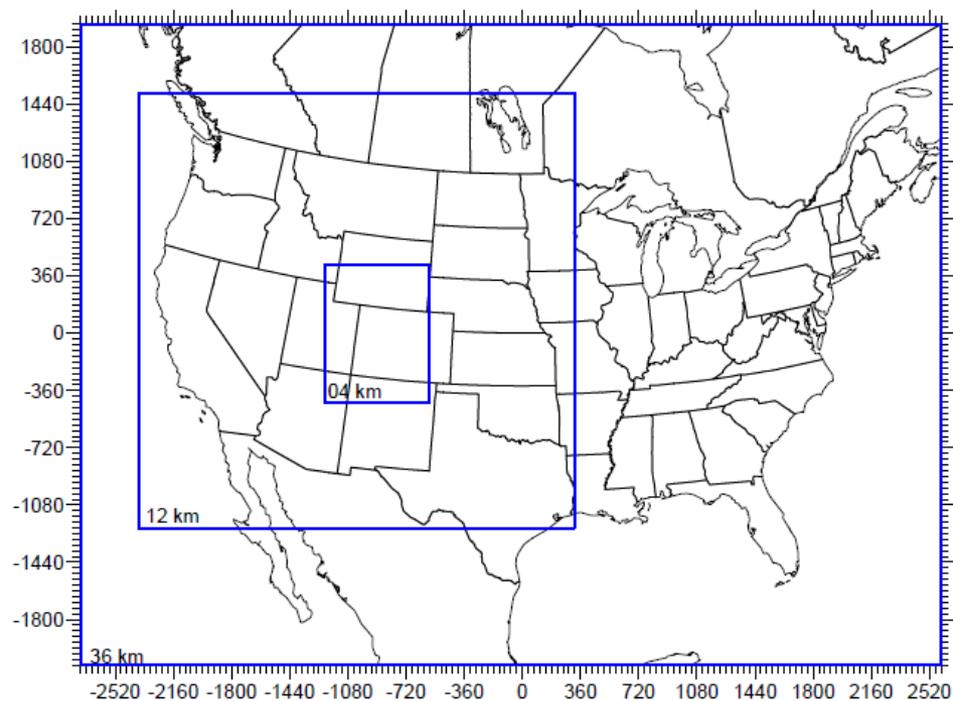
- Its something different...
- Large file size
- Longer run times
- How to insert emissions
- How to process Visibility or Deposition
- Less conservative

WestJump 2008 Meteorology



Modeling Domain

WestJump 2008 PGM



CAMx Modeling Domain

36 km : 148 x 112 (-2736, -2088) to (2592, 1944)

12 km* : 227 x 230 (-2388, -1236) to (336, 1524)

04 km* : 164 x 218 (-1228, -436) to (-572, 436)

* includes buffer cells

Figure 1-4a. Definition of the 4 km Detailed Source Apportionment Domain (DSAD) that is in a two-way grid nest with the 12 km WESTUS and 36 km CONUS domains.

Start with a good base run

- WestJump 2008, EPA 2011 Model Platform, other RPO/MJO analysis
- Must have a National and Regional Performance evaluation
- Must be publically available and fixed



**Western Regional Air Partnership (WRAP)
West-wide Jump-start Air Quality Modeling Study
(WestJumpAQMS)**

Final Report

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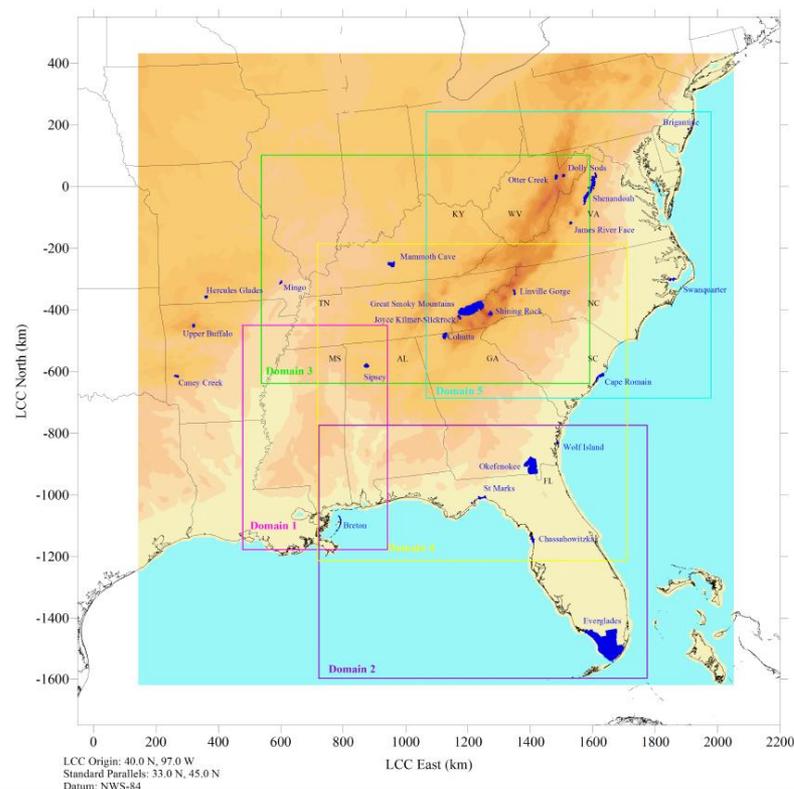
Alpine Geophysics, LLC
University of North Carolina

September, 2013



Mimic Vistas Distribution Method

- Permit size domains
- Performance evaluations for each domain
- Meteorology and base emission inventory provided (IC/BC files)
- Tools to incorporate and evaluate a single or small source groups
- Access to pre-compiled Windows based executables



Status & Timeline

- Evaluation Phase
- Outstanding issues (Multi-Year, 98th percentile, Q/d methods, etc...)
- Presentation during 11th Modeling Conference
- Ideas and input are welcome...

Would this method

WORK FOR YOU?