

Western U.S. Background Ozone and Transport Air Quality Planning Issues

HAQAST5 Phoenix, AZ

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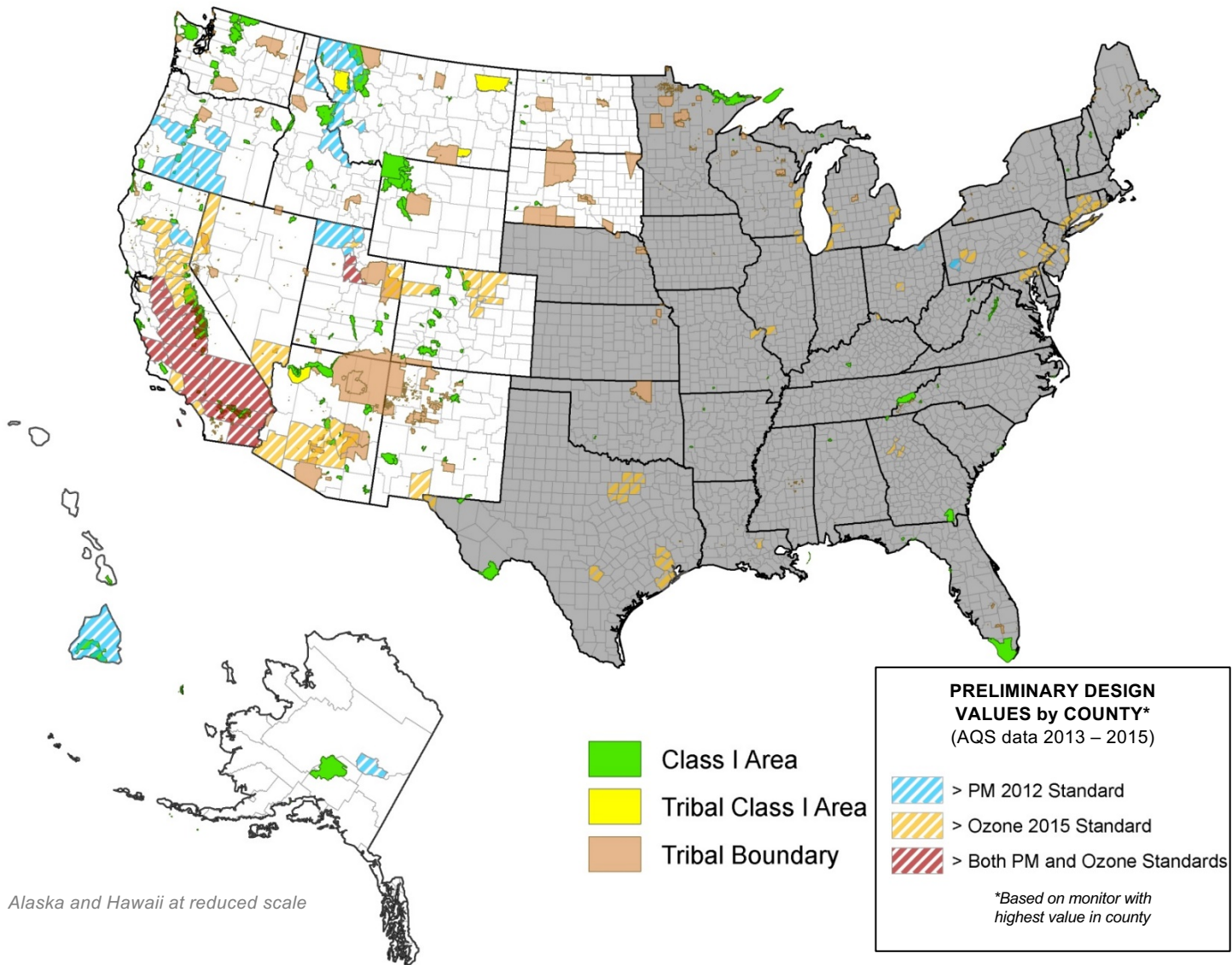




Air agencies include: 15 states, >200 tribes, >40 local air agencies, 4 EPA regional offices, 4 federal land managers

Public lands >60% of regional land area (greater in AK), 118 Class I areas

Drought, fire, climate change, stratospheric intrusions, international transport = uncontrollable sources



Regional concern and motivation

- Attainment of the 2008 (75 ppb) and 2015 (70 ppb) ozone NAAQS by the time required by the Clean Air Act (CAA) may be difficult for many areas due to large contributions of ozone transport (interstate, international, and natural)
- Reasonable local and state ozone precursor control strategies may be insufficient to attain the ozone NAAQS by date required by the CAA
- Section 179B of the Clean Air Act (“International Border Areas”) can also be considered, which allows an area to demonstrate that they would have attained the ozone NAAQS but for the contributions from international sources

Demonstrating attainment with modeling

Existing ozone
nonattainment areas
have chronic issues
achieving standards,
plus

- increasingly stringent standards

Example areas with
2011 (2009-2013)
Ozone DVs above the
NAAQS

- Several areas would have attained the 2008 ozone NAAQS “but for” contributions of international anthropogenic emissions

Site ID	State	County	DVC	NoIntl	Diff
60376012	California	Los Angeles	97.3	91.6	5.7
60670012	California	Sacramento	93.3	87.5	5.8
480391004	Texas	Brazoria	88	84.1	3.9
421010024	Pennsylvania	Philadelphia	83.3	80.4	2.9
240053001	Maryland	Baltimore	80.7	78.6	2.1
80590006	Colorado	Jefferson	80.3	73.9	6.4
60773005	California	San Joaquin	79.0	72.6	6.4
211110051	Kentucky	Jefferson	77.3	75.0	2.3
370670022	North Carolina	Forsyth	75.3	72.5	2.8
560350099	Wyoming	Sublette	77.3	69.3	8.0
250070001	Massachusetts	Dukes	77.0	72.1	4.9
490353006	Utah	Salt Lake	76.0	69.1	6.9
60592022	California	Orange	72.0	66.9	5.1
80310014	Colorado	Denver	71.0	65.2	5.8

Applications of global model data as regional modeling boundary conditions need to be codified between the science and regulatory communities, by federal agencies for all users

Current, clear, and unambiguous scientific findings are needed about uncertainty, assessment methods, and applications of global modeling products as boundary conditions and to clarify transport within the U.S.

Resources and usable tools for applying data and knowledge from global models and observational studies across the West are likely beyond the scope of most/many air regulatory agencies – how will that work be done and when, and whom will be responsible for communicating those results?

Going Forward:

- 1) Enable more direct communication with air quality manager / project collaborators – remote sensing / global model products have differential value and utility for air quality mgmt. by location and nature of issue
- 2) Understand that science results do not equal regulation for many reasons
- 3) Recognize that improving EPA databases and inter-federal agency understanding may or may not translate clearly to the agencies actually implementing controls / managing air quality
- 4) Make science results with uncertainty specified, accessible via customizable web tools / systems for spatial, temporal, and chemical displays of air quality data

