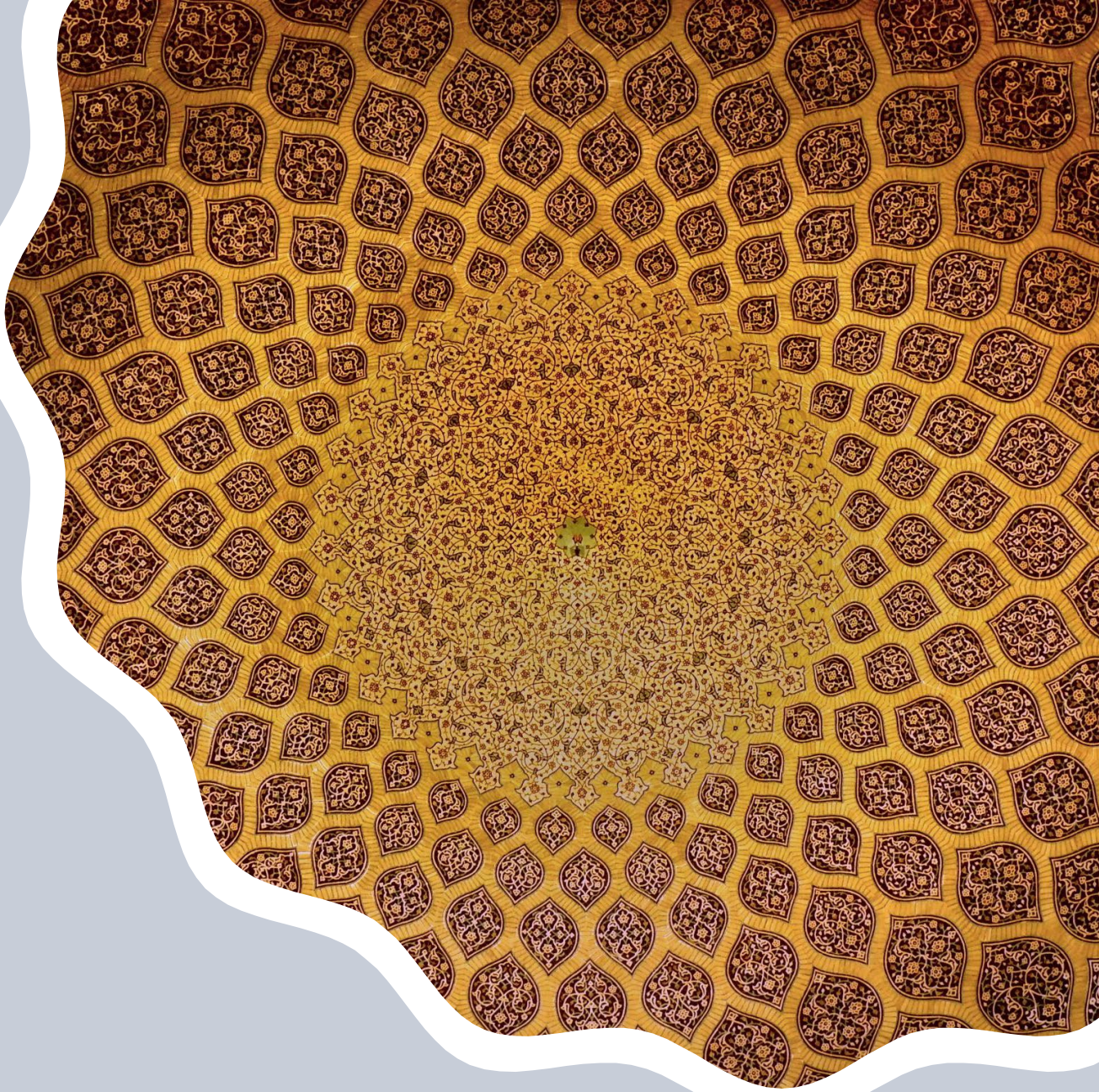
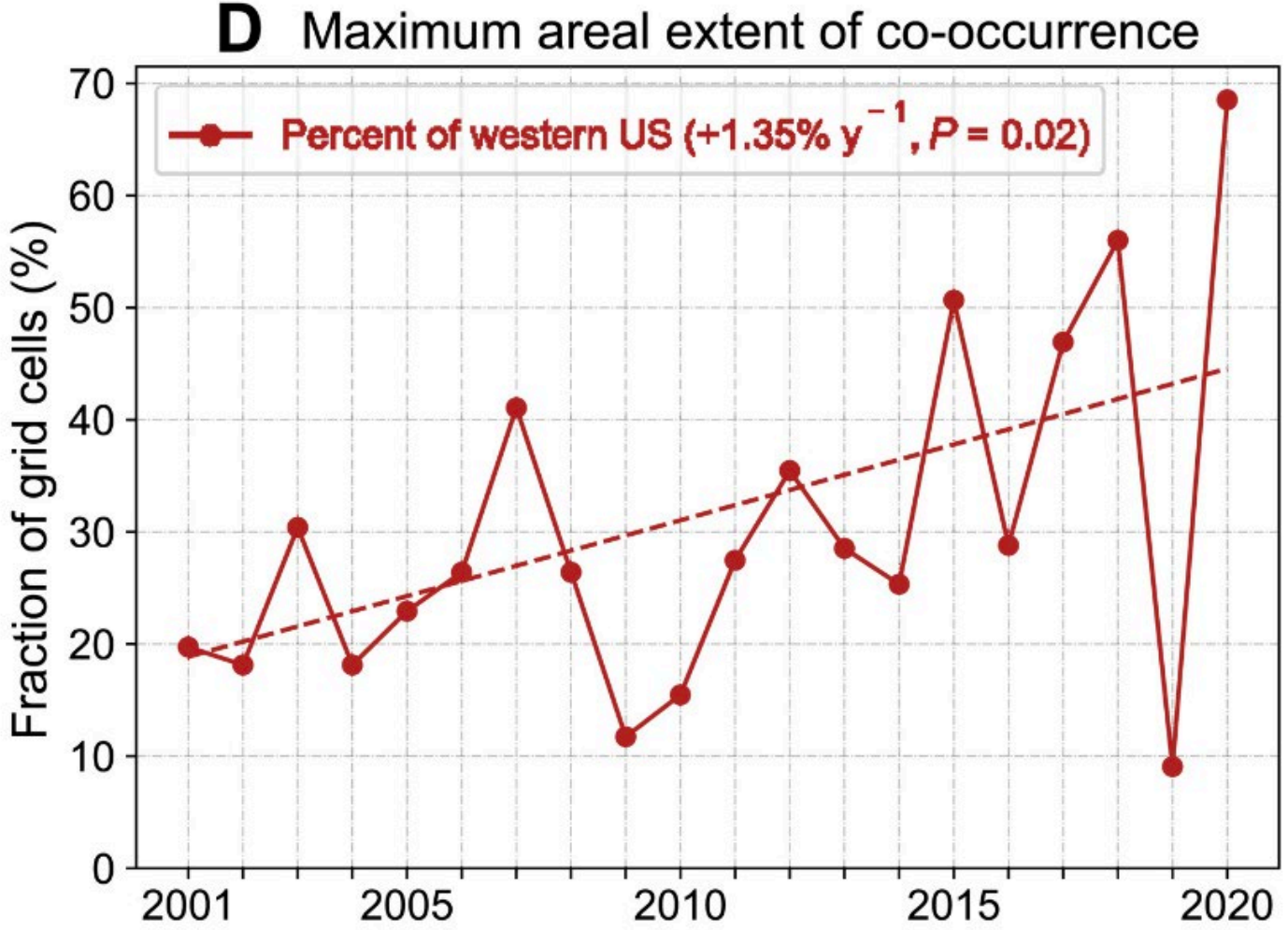
WESTAR/WRAP Wishlist for NAAQS Implementation



Mary Uhl, WESTAR/WRAP

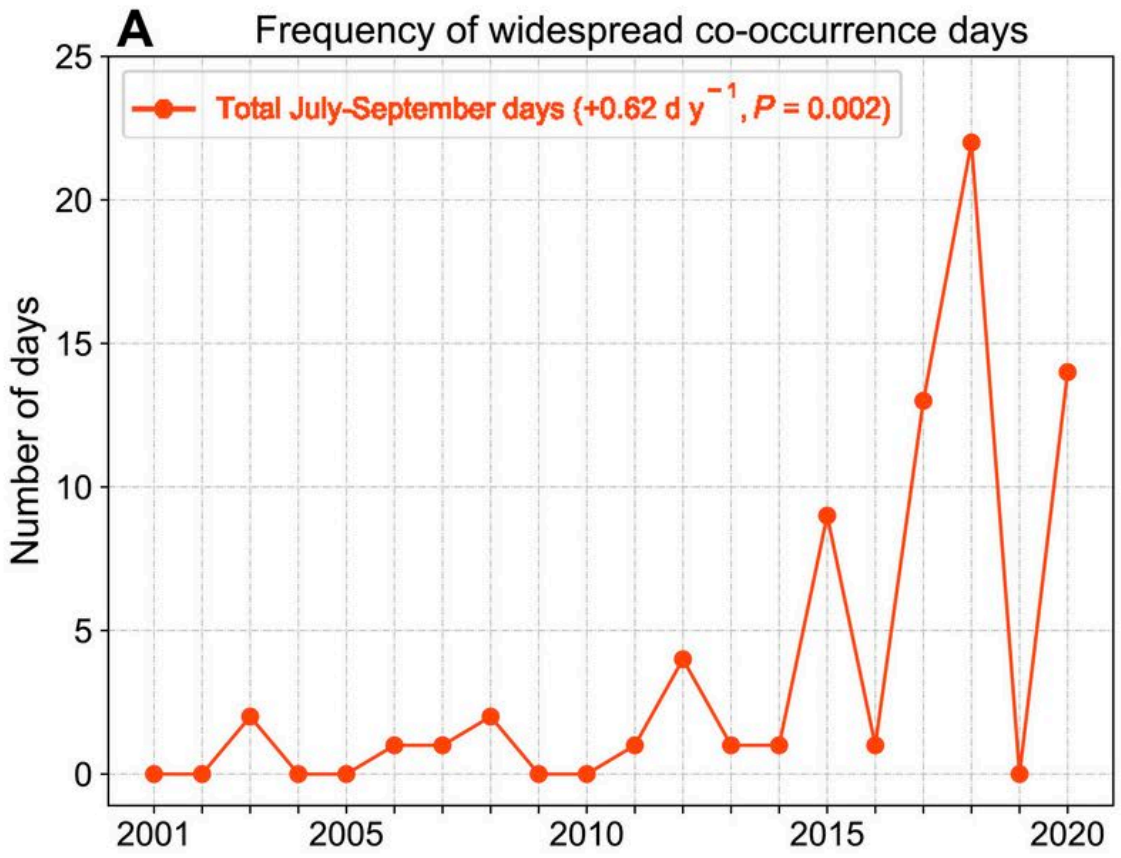
AAPCA meeting, April 2022

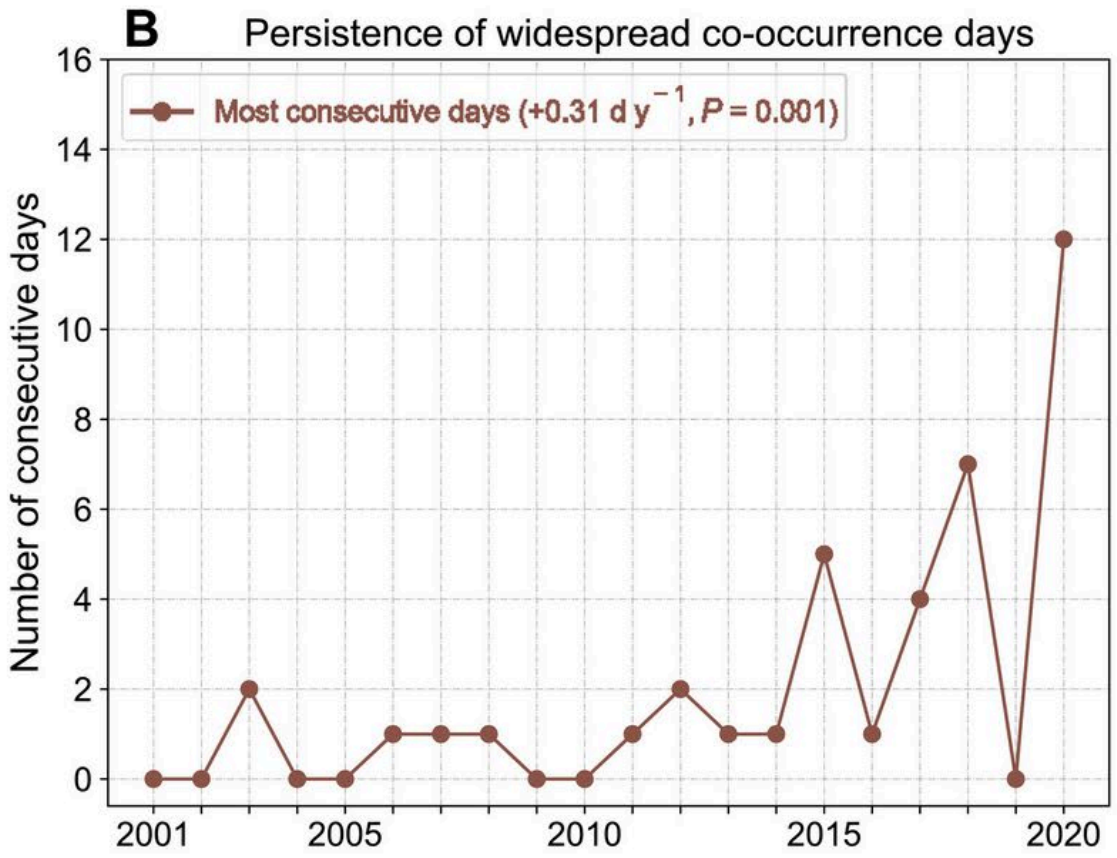
Spatial extent of PM2.5 and Ozone co-occurrence in the West



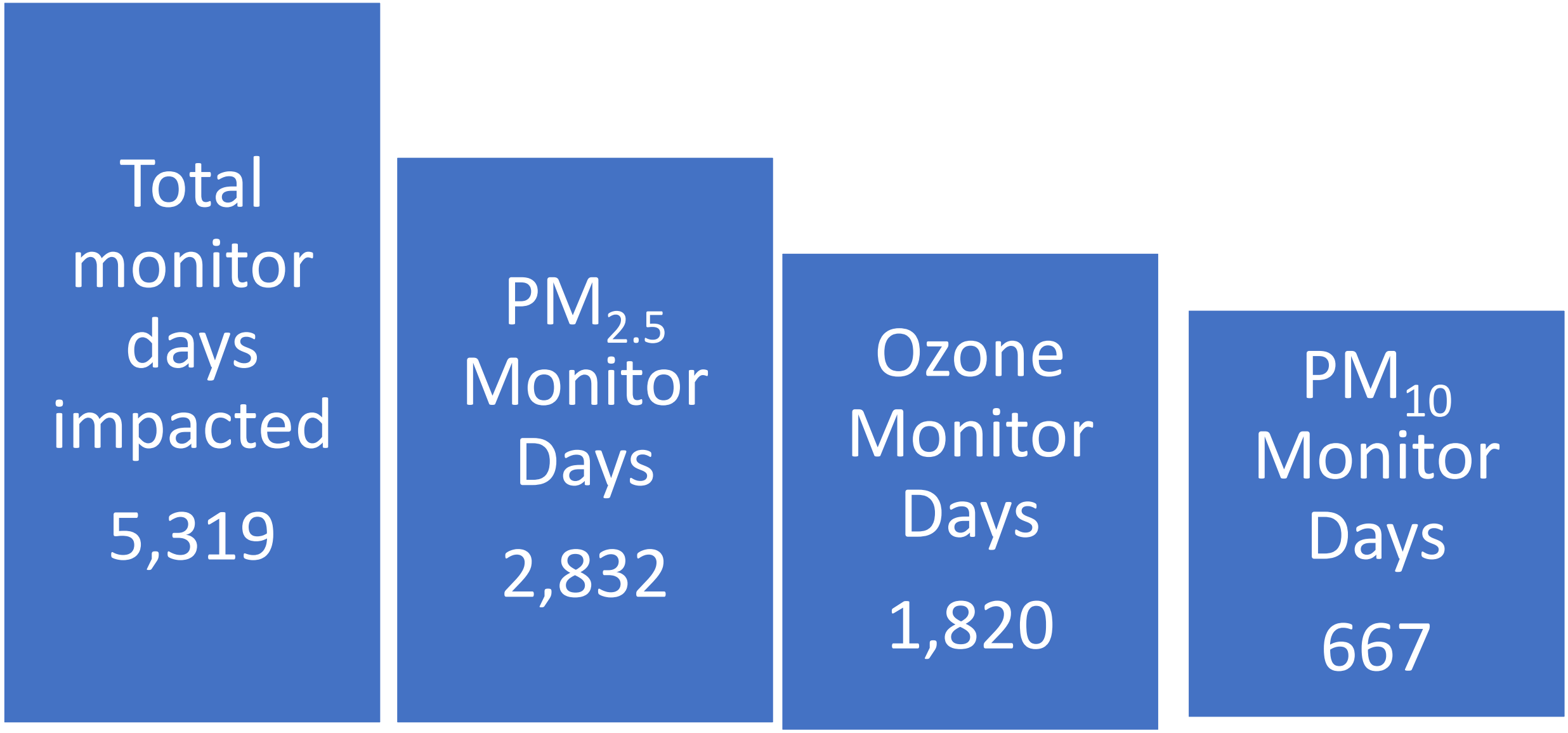
Frequency and persistence of widespread* co-occurrence are increasing

*Days with simultaneous co-occurrence in >25% of western U.S. grid cells (n = 72)





Western Monitor Days and Smoke Impacts 2021

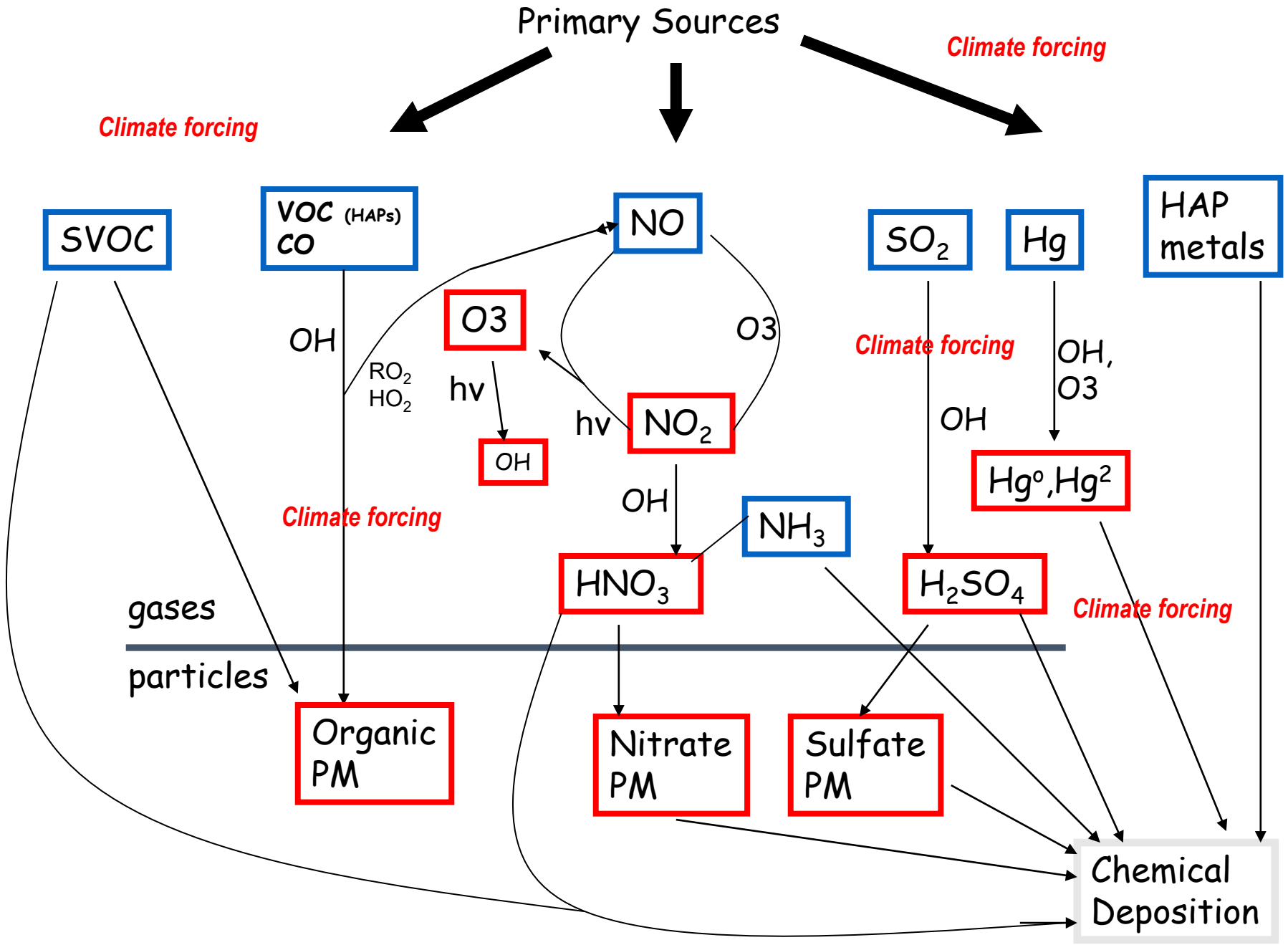


The West is different:

- Dominant role of fires
- Basin-specific O&G emissions estimates
- Retirement of western fossil-fueled EGUs
- EPA's national tools historically focus on Eastern U.S., starting with NOx SIP call
- Meteorology (mountain-valley, photochemistry on snow surfaces)
- WESTAR/WRAP Regional Technical Center (system of systems):
  - Technical Support System (TSS) – regionally consistent and complete data analysis / decision support for Regional Haze planning
  - Intermountain West Data Warehouse (IWDW) - easy online access to monitored air quality data, gridded modeling products, emissions data, and an integrated suite of tools to help assess air quality

"*the complex terrain, variety of emissions, meteorology and spatial vastness suggests that Western U.S. assessment practice will lead efforts in comprehensive air quality characterization out of necessity*"

Integration across pollutants, climate and media: tradeoffs and optimum strategies?



- **EPA 2021: Comparison of ozone measurement methods in biomass burning smoke: an evaluation under field and laboratory conditions**
- ***Russell W. Long[1], Andrew Whitehill[1], Andrew Habel[2], Shawn Urbanski[3], Hannah Halliday[1], Maribel Colón[1], Surender Kaushik[1], and Matthew S. Landis[1]***

- ***Implications:*** *"*The findings from this research effort and the observations from ambient studies (Landis et al., 2018; Akagi et al., 2012) raise concerns that routine regulatory monitoring and wildland fire research study O_3 measurements utilizing UV photometric FEM instruments may be reporting positive measurement artifacts as O_3 during smoke-impacted events."

Obstacles to States Achieving the NAAQS

Wish #1: Meaningful input for STATES/LOCALS/TRIBES in the process

STATE/LOCAL/TRIBAL AGENCY REPRESENTATION ON CASAC IS LIMITED

STATE/LOCAL/TRIBAL AGENCY REPRESENTATION ON CASAC PANELS IS LIMITED

OPPORTUNITIES FOR INPUT ARE LIMITED, ESPECIALLY ON AN EXPEDITED SCHEDULE

Wish #2: Resources for robust State/Local/Tribal participation on technical work

- National platform development
- Base year selection driven by meteorology
- State/local/tribal collaboration opportunity may pass before importance of effort is realized
- SIPs are a snapshot in time
- Clarity on monitoring issues

Wish #3: It takes a village to improve air quality

- Trains, Planes and Automobiles
- Cross-agency coordination
- Federal/state/local/tribal cooperation
- Multi-pollutant planning

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