An Update on the Activities of the Western Regional Air Partnership 'WRAP v2.0'

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What is the WRAP?

History of the Western Regional Air Partnership:

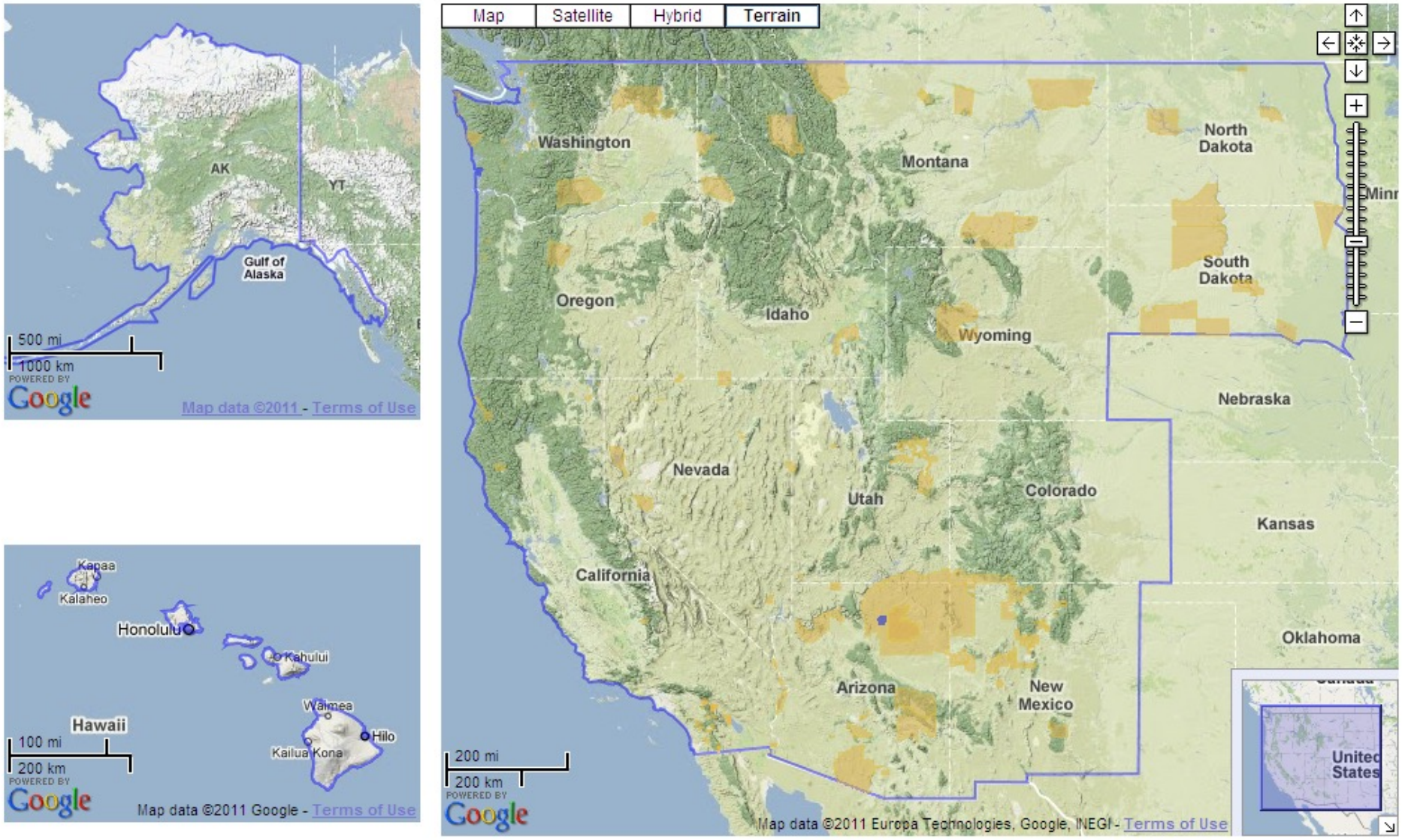
- Formed in 1997

- One of five Regional Planning Organizations in the U.S. created to assist States & Tribes in understanding the sources of man made visibility impairment in National Parks as per the Regional Haze Rule of the Clean Air Act.

- From 2000 to 2010 WRAP spent over $20 million for:
  - monitoring data analyses
  - emissions inventory development
  - pollutant transport modeling (SMOKE, MM5, CMAQ, CAMx)
  - source apportionment analyses
  - planning & coordination of activities among the western States (web data servers, meetings, trainings)

What is the WRAP? (cont.)

WRAP Geographic Coverage: State and Tribal Areas



What is the WRAP? (cont.)

That's where WRAP has been, where's it going?

- With Regional Haze SIPs due ~2008, between 2007–2009 WRAP was winding down activities.

- However, many saw the benefits of continued regional-scale air quality planning and technical analysis, e.g.
  - cross-state consistency in emissions projections
  - centralized modeling center
  - assessing regional scale transport

- To broaden its relevance and funding possibilities, in 2009 WRAP revised its charter to have:
  - a much broader one-atmosphere, multi-pollutant approach
  - a stronger emphasis on technical than policy work

What is the WRAP? (cont.)

Specifically, the areas of emphasis in WRAP's revised charter:

- Continue regional haze work and assessing sources of visibility impairment
- Broaden mission to include current and evolving regional air issues like, potentially
  - ozone
  - PM2.5 and PM10
  - nitrogen transport, deposition, and critical loads
  - mercury and other hazardous air pollutant deposition
  - climate change
- A recognition that source apportionment tools add significant value, so where possible, identify the impacts of regionally significant emission sources like
  - mobile
  - fire
  - traditional and alternative energy development/extraction
  - windblown dust
  - electricity generation
- Continue to develop and maintain web-based databases for regional and sub-regional technical analyses

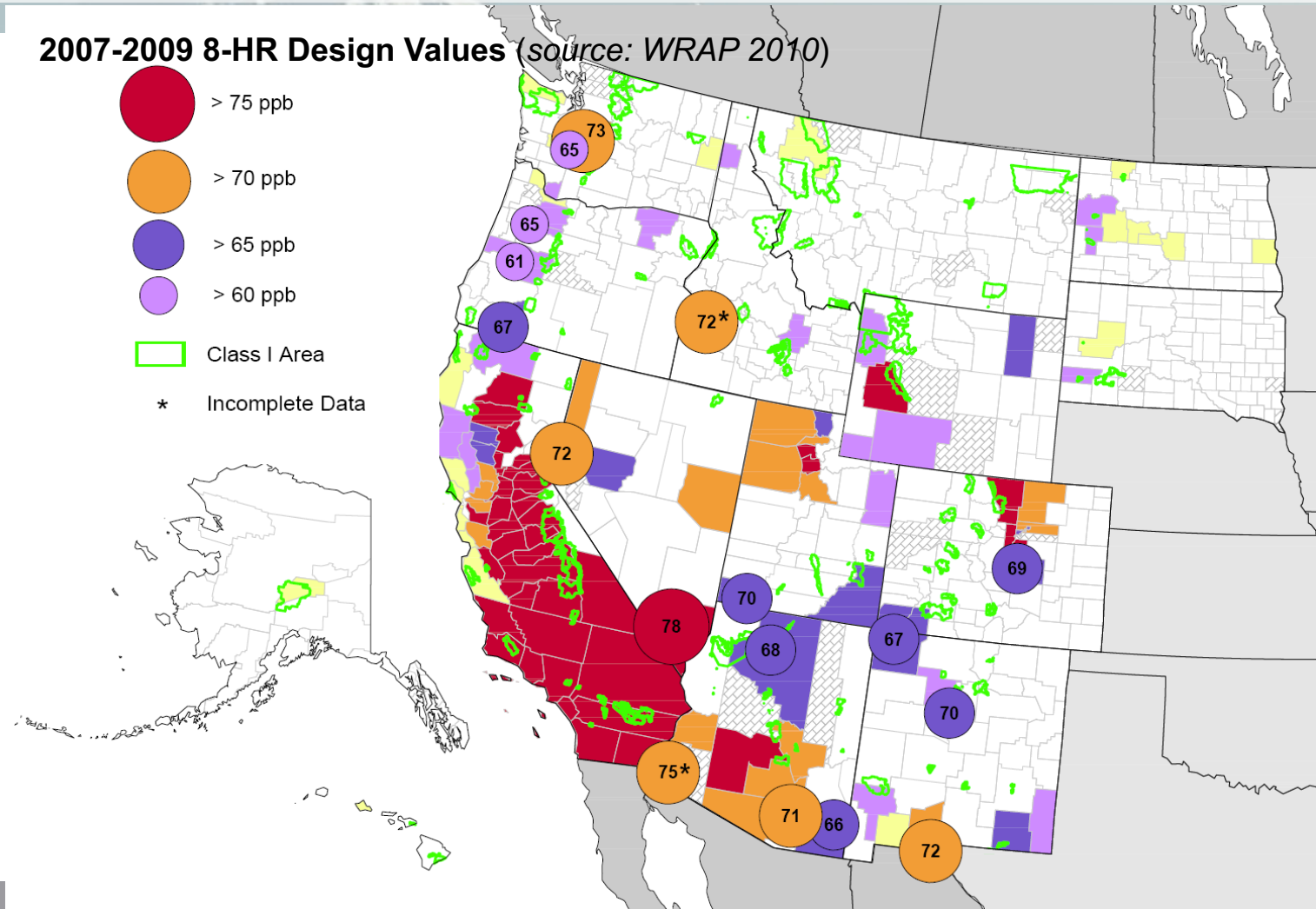
What are WRAP's Planned Activities in 2011 - 2012

!! New Regional Modeling Effort for Ozone - Motivation

- **EPA has proposed a new 8-HR ozone standard between 60 – 70 ppb as well as possibly a new secondary standard for ecosystem protection.**
- **Any new standard within the proposed range will result in multiple new ozone nonattainment areas in the west including rural and winter violations.**

-Monitors that would violate a new ozone standard in the WRAP between 60-75 ppb (colored circles) based on 2007-2009 data.

-Regional transport expected to play an increased role.



!! New Regional Modeling Effort for Ozone – Details

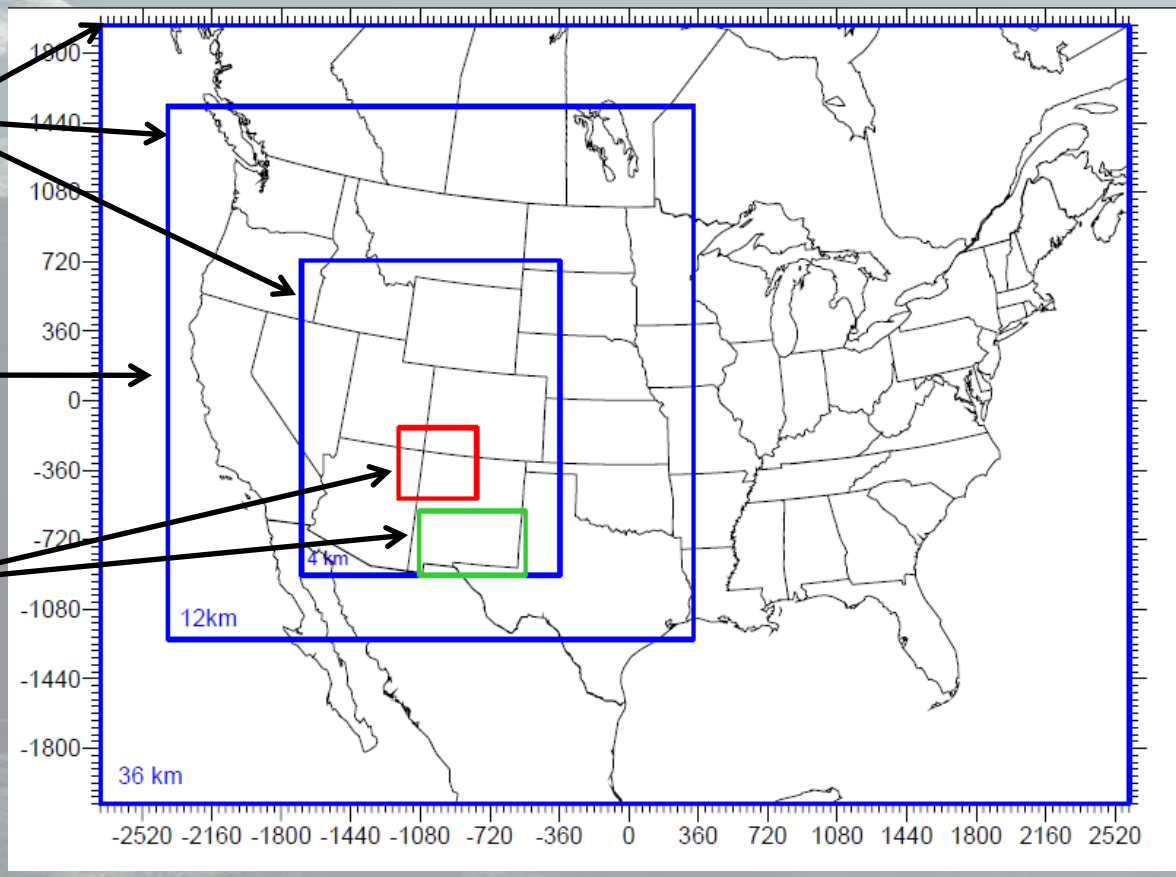
- **The project is called the 'West-wide Jumpstart Air Quality Modeling Study' (WestJumpAQMS)**
- **Funded at $715,000, 1 year, May 2011 - Spring 2012**
  - **$215k from a consortium of NM BLM, NM AQB, EPA R6, BP**
  - **$500k was added just recently from BLM headquarters in DC**
- **Contract issued to ENVIRON**
- **Main Goals**
  - Conduct ozone modeling for a base year in the west at 36 & 12 km, with selected 4 km domains.
  - Perform a comprehensive model performance evaluation.
  - Perform a source apportionment analysis to evaluate local, regional, international, and natural source impacts on elevated ozone concentrations (both rural and urban) across the west
  - Develop a modeling platform that can be used to as a starting point for (1) ozone SIP analyses, and (2) regional air quality planning and NEPA (EIS – Environmental Impact Statement) analyses in the west (reason for BLM funding)
  - Provide a framework for performing future analysis to address ozone, PM, visibility, and deposition issues in the western U.S.

New Regional Modeling Effort for Ozone: WestJumpAQMS

Scope of Modeling
For base year (? 2008)

- **Meteorology & Emissions processed at 36, 12, and 4 km**
- **Ozone and PM source apportionment at 12km**
- **Ozone and PM source apportionment at 4km high res. windows**
- **BLM may add additional 4km high res. windows within larger 4 km window**

Proposed 36, 12, and 4 km domains with inset 4 km high res. source apportionment domains



The WestJumpAQMS project will be leveraged by ....

WRAP's Fire & Ozone Analysis Project: (July 2011 – Dec 2012)

A separately funded project by FLM Joint Fire Sciences Program

Goals & Scope

- to determine the contributions of prescribed fire and wildfire events to elevated Ozone
- to quantify fire impacts at monitoring sites as well as assess the degree of regional transport
- the project will start with existing WRAP FETS data and will build a 2008 nationwide fire inventory for modeling and analysis
- the 2008 fire inventory will be an emissions input into the WestJumpAQMS modeling
- project will leverage the WestJumpAQMS project for source apportionment of fire impacts

The WestJumpAQMS project will also be leveraged by ....

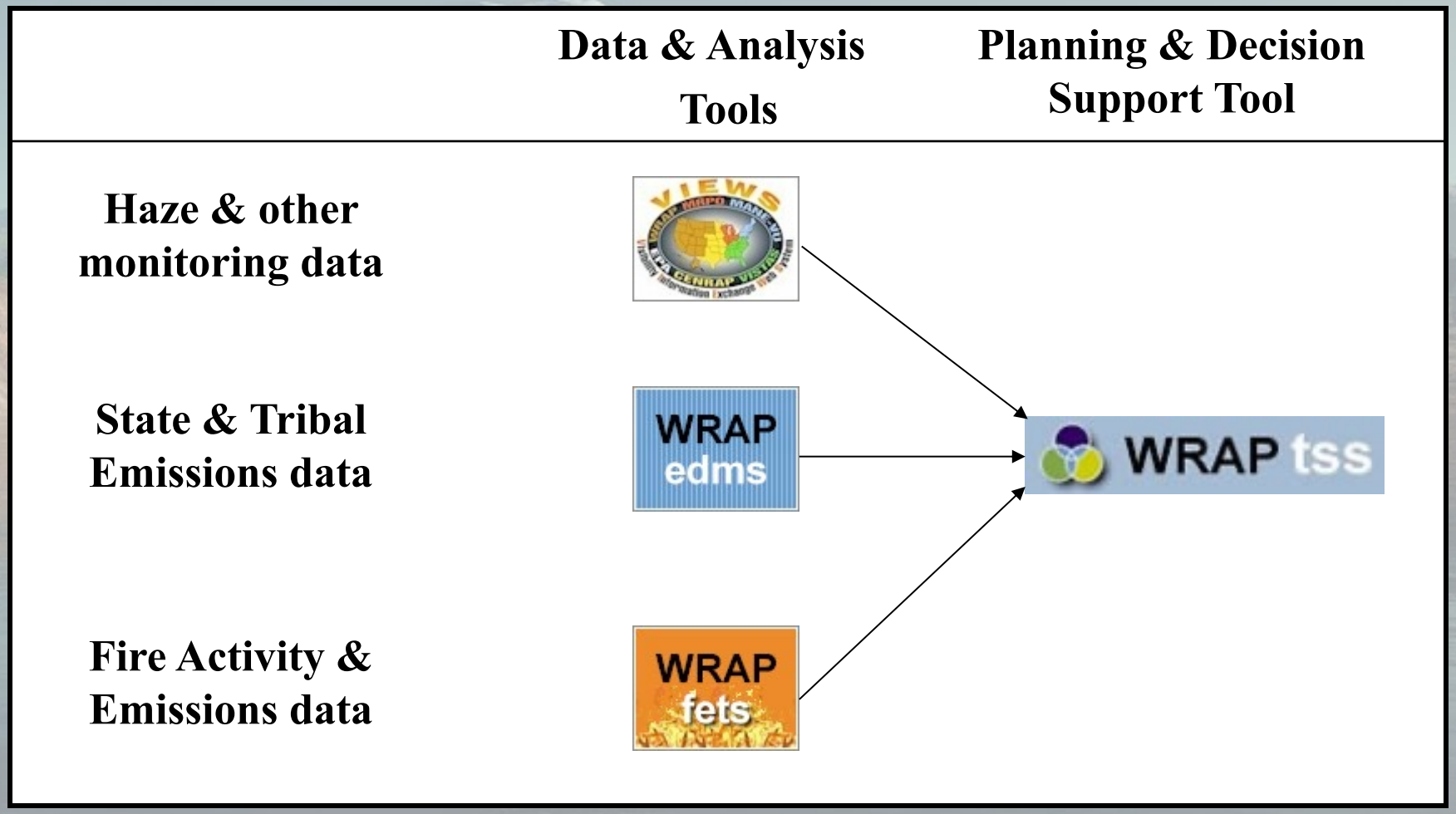
WRAP's Biogenic Emissions Inventory Improvement Project (June 2011 – Oct. 2011)

Funded by WESTAR (~$130k)

Goals and scope

- The goal is to update & improve exiting biogenic emissions models and model inputs for the western US
- In particular, the project will incorporate improved land use & land cover data and emission factors for vegetation
- The project will feed better biogenic emissions into the WestJumpAQMP project and look at ozone sensitivity
- The project will leverage results from existing and current projects:
  - Clark County, NV biogenics' studies
  - Other studies by western local and state air agencies
  - Current EPA ORD project
  - BLM air quality modeling studies

The WRAP will Continue Support of Web-based Data Systems



Experience with these regional technical systems will be applied in transition to multi-pollutant analysis and WestJumpAQMS

Thank you!

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WRAP 2011 Activities: Ozone

Development of an Ozone Conceptual Model for the West

2011 project to help prepare WRAP members for the analysis and planning effort needed under more stringent Ozone NAAQS

Guidance documents from EPA suggest preparation of such a report when Ozone nonattainment has not previously existed, as will likely be the case across the West, particularly in remote Class I areas as well as for a number of urban areas

Project work to address themes such as:

- Source sectors
- Topographical influences
- Temporal variation
- International, state-to-state, and other inter-jurisdiction transport of Ozone and precursors
- Contribution of natural versus anthropogenic sources

Budgeted for $55,000
Status: No RFP issued. WRAP is considering an alternate model to get this work done. i.e., not hiring a contractor but organizing a workgroup of states and locals to summarize existing knowledge for each airshed/area.