WRAP 2014-18 Integrated Workplan

www.wrapair2.org

May 2014 draft

WRAP Membership Meeting

Overview

- Workplan development process
- Review outline of content
- Highlight key regional activities
- Identify additional review and input

Workplan development process

- Calls with Technical Steering Committee, funding agencies' representatives, and subject matter experts
  - 3 group calls Feb. to May
  - Moving slowly due to workload
  - Establish process to complete workplan to final review draft for consideration and adoption by WRAP Board at Sept. meeting

Executive Summary and Background sections

- Brief history of WRAP
- Discuss regional work and accomplishments
- Summarize collaborative technical and planning project for members
  - Regional haze
  - Emission inventories
  - Air quality impacts from all sources
  - Source apportionment and transport
  - Data analysis and warehousing

Purpose and Example Questions to be answered

- Workplan Purpose
  - Address vision statement approved at November 2013 WRAP meeting:
  - **Our vision is to be the leading technical and planning information source for air quality management in the western United States.**
- What are the technical analysis and planning support needs of WRAP members?
- Where do (and would) the resources come from?
- How should projects fit into regional support activities (and vice-versa)?
- How to coordinate in-kind efforts of WRAP members and leverage for the benefit of the Partnership?

Sources and geographic regions to be studied and assessed for controls or improved management

- Regional analysis possibilities include:
  - Non-BART point and stationary area sources;
  - Concentrated geographic groups of sources proximate to Class I areas;
  - Oil and Gas production and distribution;
  - Dust emissions;
  - Fire emissions;
  - Secondary aerosol precursor emissions such as ammonia and volatile organic compounds; and
  - Sources outside the WRAP region, international transport, and/or beyond the states' control.

Regional Data Analysis and Planning Support

- Continue developing, refining, and analyzing regional data and analysis tools for strategic evaluation of ongoing and future control programs for air quality planning focusing on a Western Modeling Framework utilizing data from WRAP members and applying photochemical modeling tools:

- *Linkages to 3-State Air Quality Study, AirPact, other studies…….*

  - Tracking, reporting, and analyzing progress for regional haze;

  - Regional contributions to Ozone and PM health and welfare standards' nonattainment issues at various scales;

  - Understanding and analyzing the nature and causes of nitrogen deposition and critical loads in the West; and

  - Regionally-appropriate and effective emissions management strategies and programs.

Regional Data Analysis and Planning Support Activities

- Monitoring assessment and data analysis
- Emissions Inventory augmentation and improvement
- Control strategy analysis
- Regional modeling and source apportionment
- Data warehousing and technical support

Contingencies

- WRAP workplan is a snapshot:

  - Plan A for what we know we have to do, at this point in time

  - Plan B contingency plan for Ozone NAAQS at or below 70 ppb

Goals for 2014-18

- Three interrelated goals for simultaneous concurrent action between 2014 and 2018.

1) Conduct regional technical and planning analyses in support of the timely and complete submittals of regional haze implementation plans due in July 2018.

2) In regional technical and planning work, analyze the effects of climate change and variation on air quality planning activities, and opportunities for greenhouse gas reductions in alignment with WRAP members' program activities.

Goals for 2014-18

3) Continue developing, refining, and analyzing regional data and analysis tools for WRAP members' strategic evaluation of ongoing and future control programs for air quality planning focusing on:

   - Conducting regional analysis work for western sources: criteria pollutants, greenhouse gases, and other emissions;
   - Tracking, reporting, and analyzing progress for regional haze – support regional haze planning for the July 2018 planning milestone;
   - Improving the understanding of transport between jurisdictions and the regional contributions to Ozone and PM health and welfare standards' nonattainment issues at various scales – to assist WRAP members with planning;
   - Understanding and analyzing the nature and causes of nitrogen deposition and critical loads in the West;
   - Analyzing regionally-appropriate and effective emissions control and management strategies and programs;
   - Incorporating emerging and new data from remote sensors and satellites into the analysis and planning process; and
   - Creating consistent, accessible databases for data that can be used in all modeling in the West.

Technical and Planning Work Activities

- Three technical work objectives within the 5-year time horizon of this plan are identified to support the organizational goals for WRAP discussed above:

1. Support and provide Regional Haze analysis and planning support

2. Analyze and track implementation of emissions inventories, trends, and study opportunities with regional photochemical modeling, for reductions across and affecting the region

3. Maintain and update technical capabilities in a one-atmosphere approach to anticipate changing and more stringent national air quality standards and goals.

WestJumpAQMS – Followup Workshops to date

South Dakota (Modeling Results PDF, and Western AQ Studies PDF), June 4, 2014

Utah (Modeling Results PDF, and Western AQ Studies PDF), April 16, 2014 - Utah Division of Air Quality blog April 24, 2014

EPA Region Tribal Air Programs' Meeting (PDF, 4MB), March 26, 2014

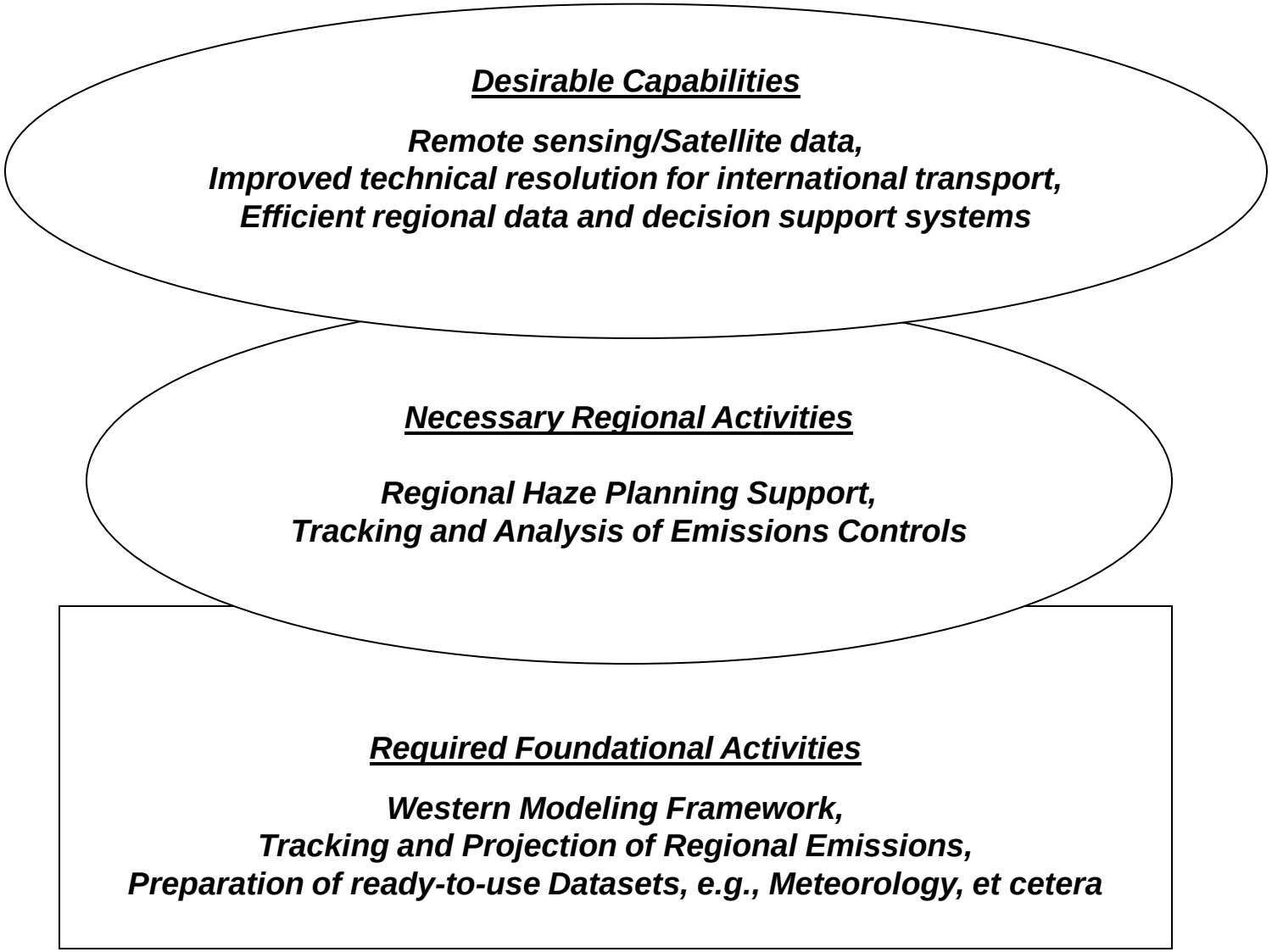
Arizona (PDF 3MB), February 5, 2014

New Mexico (PDF 3MB), December 18, 2013

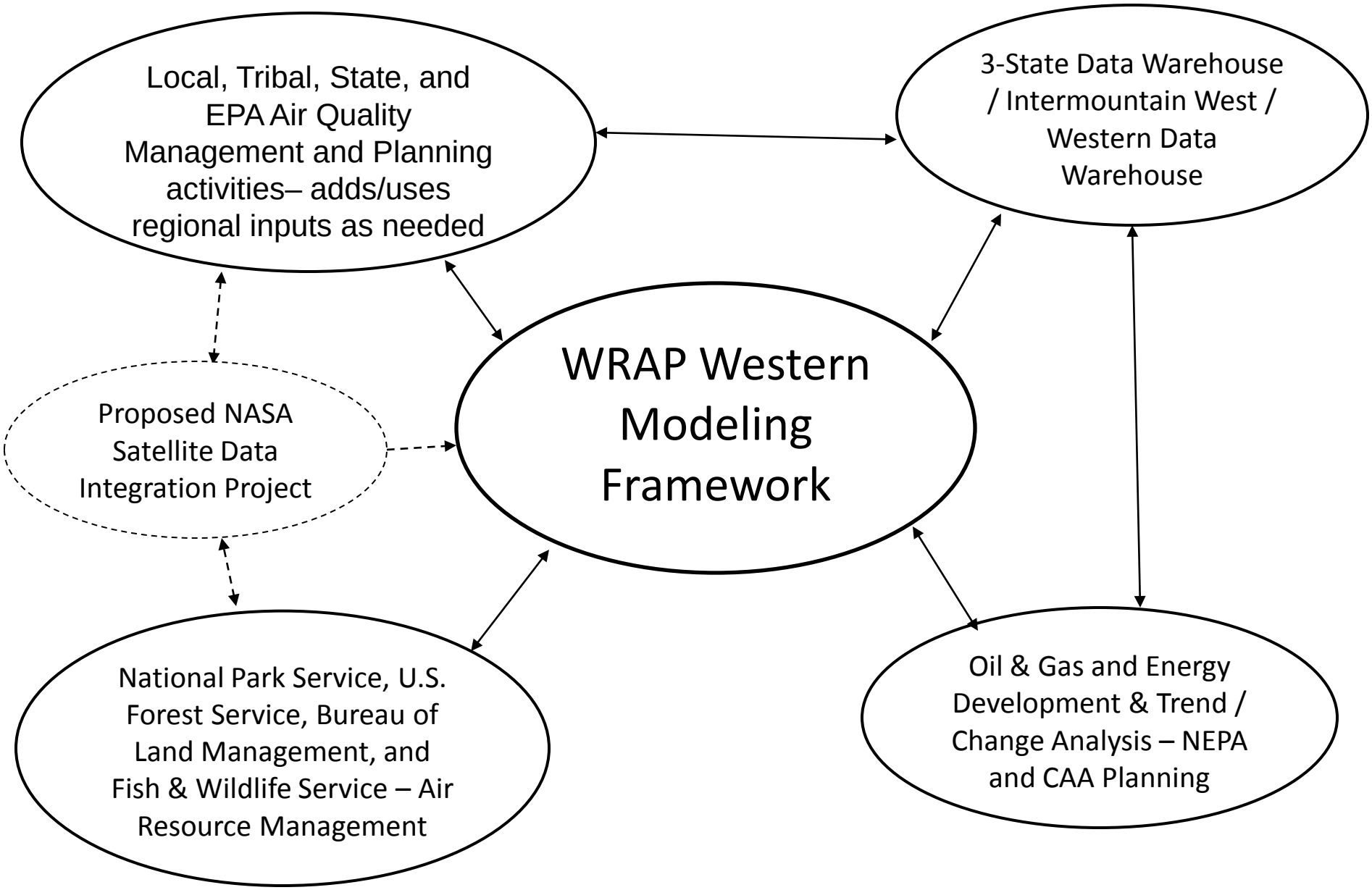
Denver Regional Air Quality Council (PDF 3MB), November 15, 2013

CenSARA / EPA Regions 6 and 7 conference call WestJumpAQMS briefing (PDF 5MB), October 17, 2013

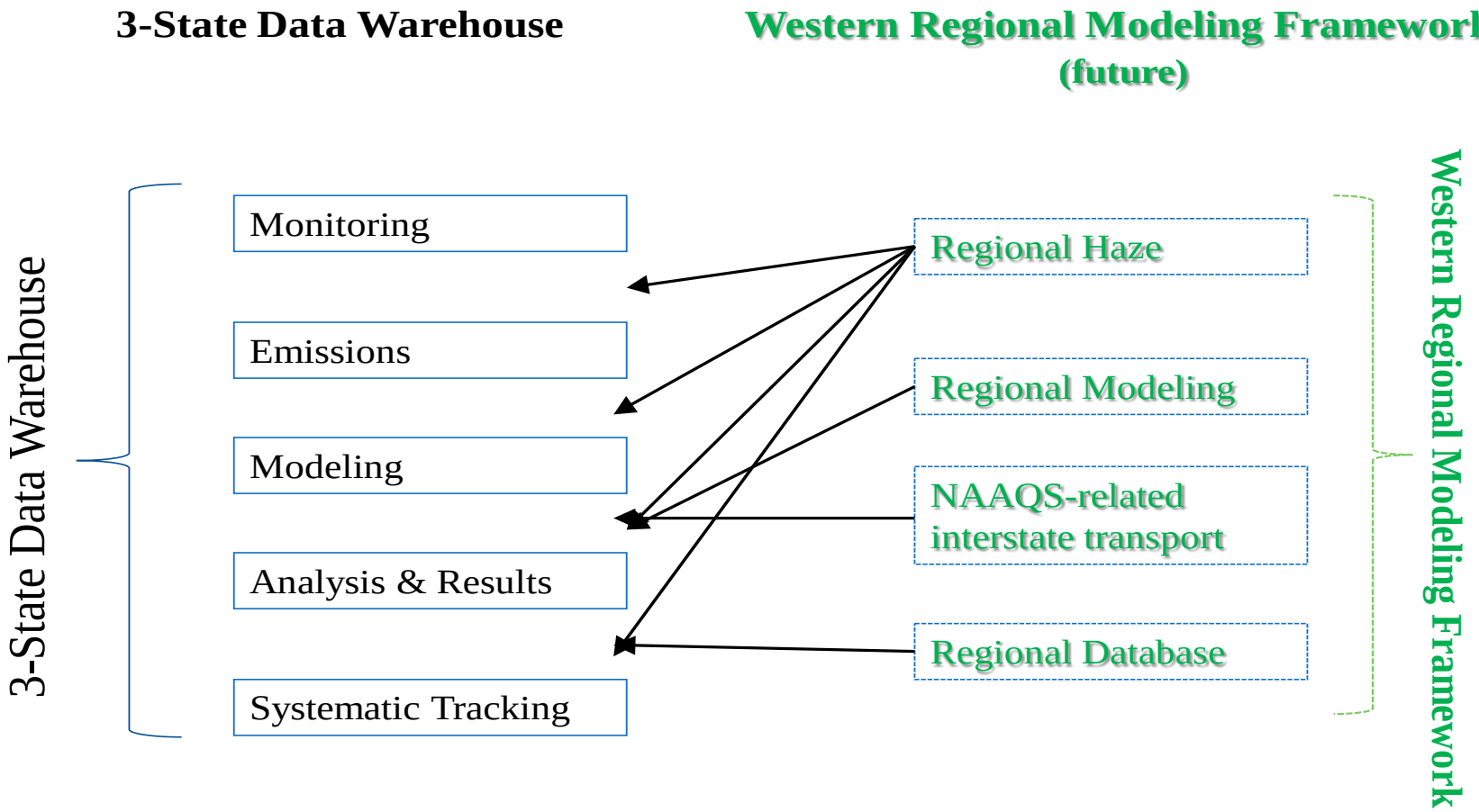
Attributes of WRAP Regional Analysis and Planning Activities



WRAP Region Technical Capacity – Inputs and Outputs



Western Modeling Framework Concept Example – Distributed/Coordinated Modeling



Oil & Gas Emissions

Integrating Different Kinds of Emissions Information - Research Needs

Top-down:

- Source sector differentiation
- Representative sampling
- Accuracy
- Gas composition profiles
- Downscaling to sources

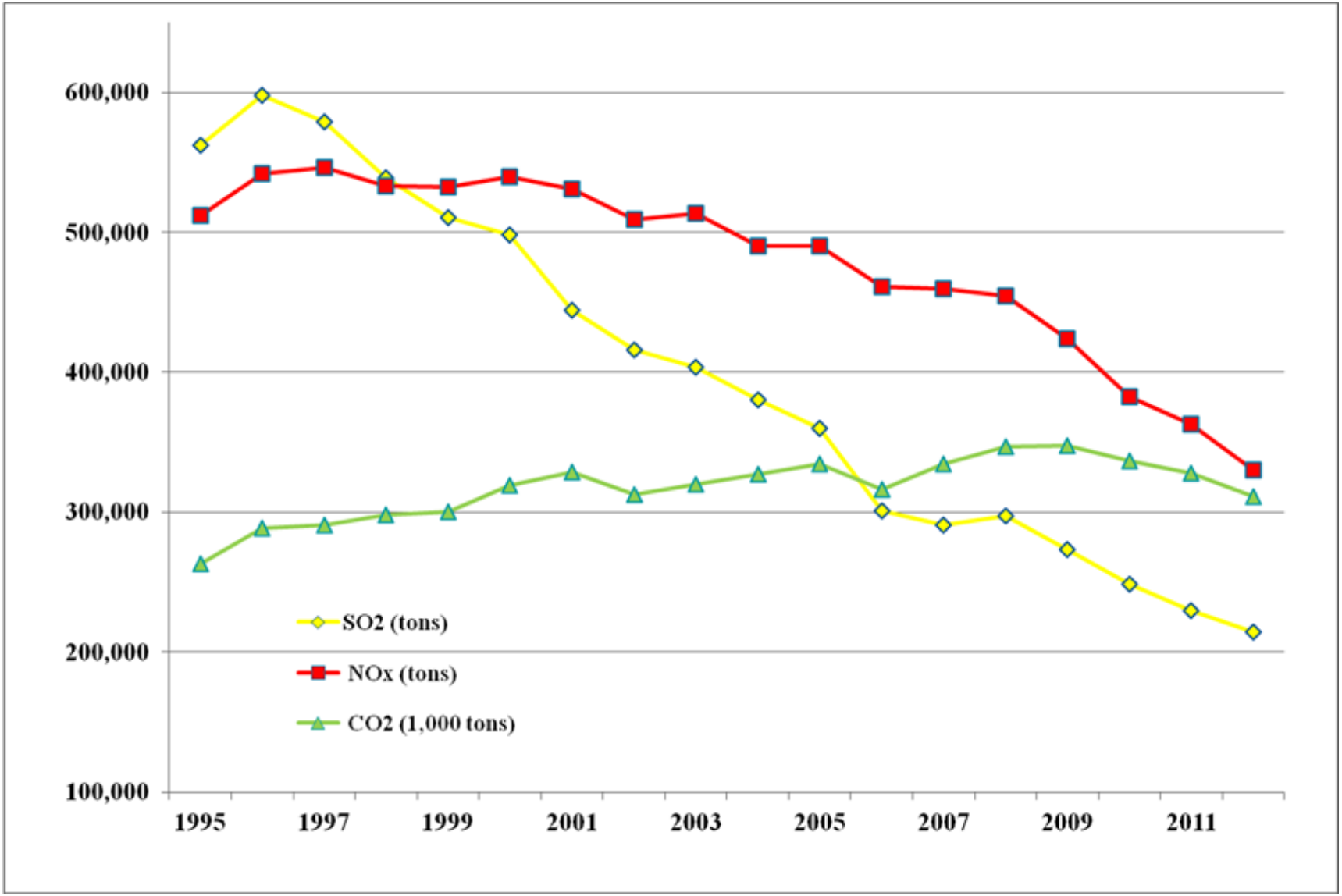
Reconcile Gaps

Bottom-up:

- "Fat tails" emission distribution
- Missing sources
- Representative samples
- Activity data
- Uncertainty characterization.

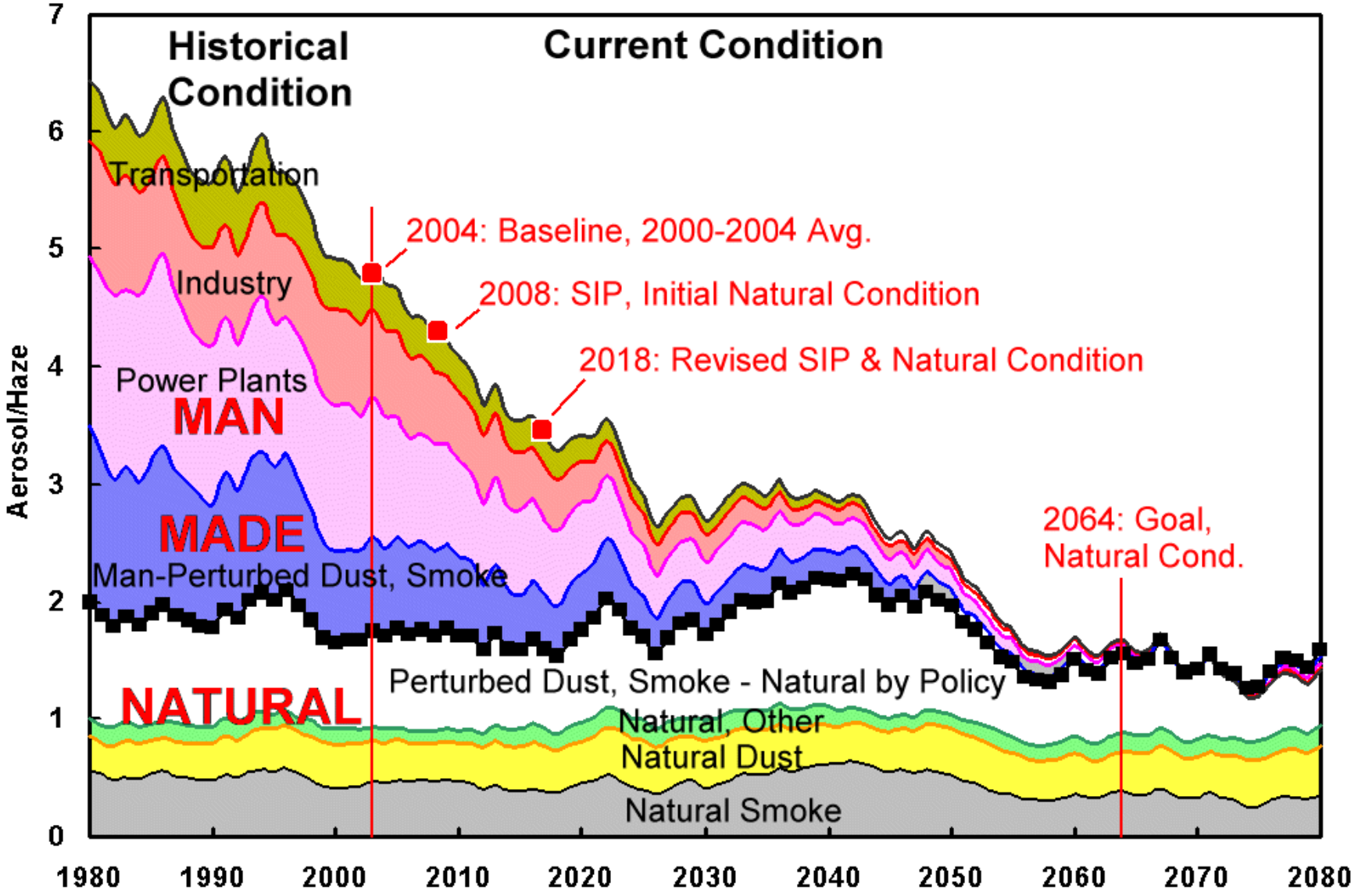
Source: NREL

Power Plant Emissions Trends – Western Interconnect



Data Source: EPA Clean Air Markets Division

Conceptual trend for mix of WRAP region emissions affecting Regional Haze planning



WRAP Organization and Structure

- For the continued successful operations of the WRAP organization, three objectives are identified to support the strategic goals for WRAP:

- Objective 1: Maintain the WRAP process…….
  - Open and transparent communications
  - Deliverables that support the common need and avoid duplication
  - Opportunities to leverage multi-agency resources to accomplish larger projects
  - Active working groups and committees implementing and tracking work under this plan.
  - Twice a year membership meetings to debrief, assess needs and prioritize work.

WRAP Organization and Structure

- Objective 2: Continue support for developing and implementing tribal capacity, including:
  - Improving the ability of Tribes to assess their air quality conditions and to develop strategies to address air quality issues as part of the larger regional planning process; and
  - Increasing the ability of Tribes to protect and manage their natural resources and communities.
- Objective 3: Maximize coordination within WRAP and leverage work of other related partner organizations.

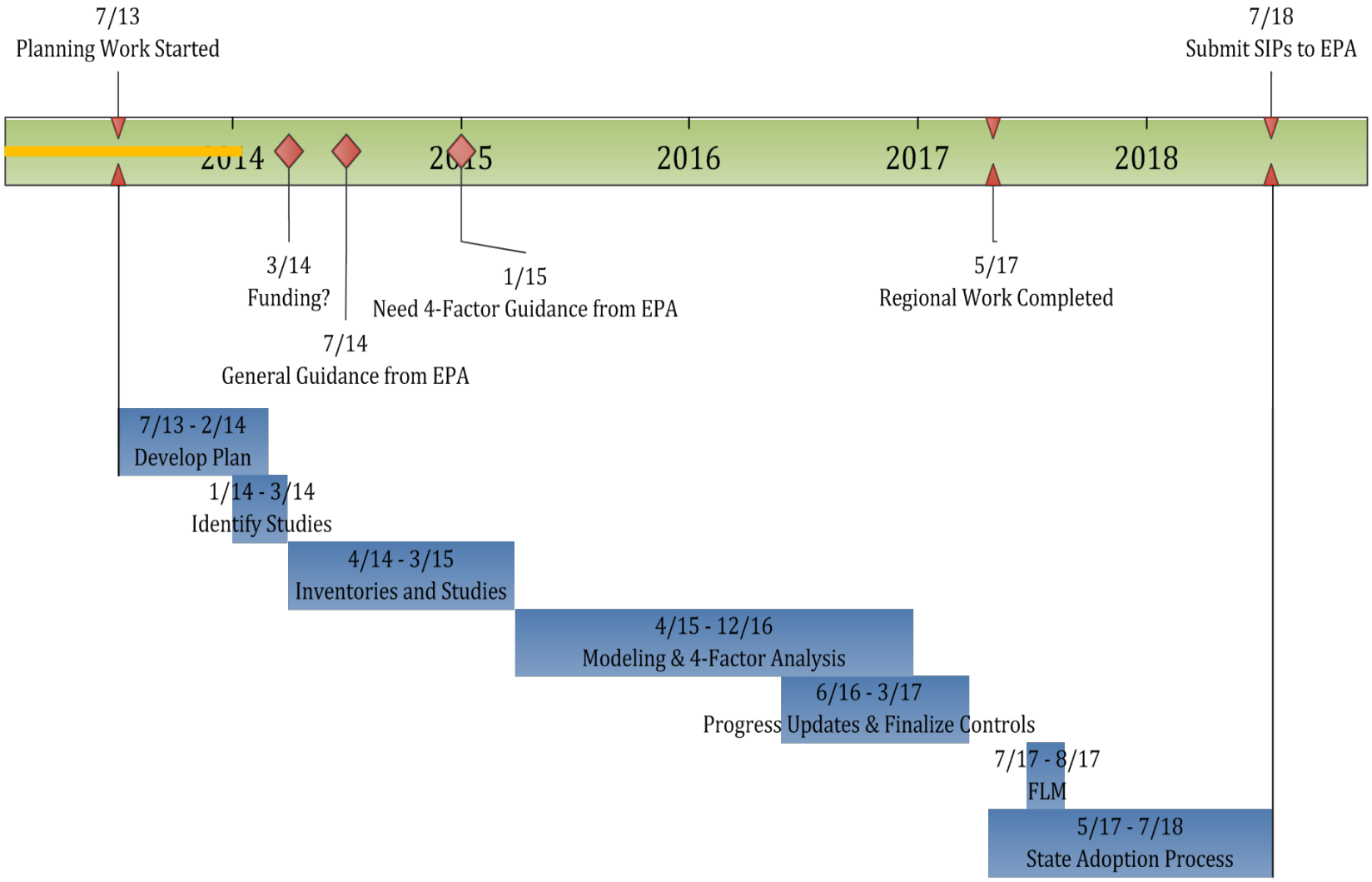
Principles for Regional Haze Analysis and Planning Support

- Focus on analysis and planning of a state's controllable anthropogenic emissions and the contribution of those emissions to haze in one or more Class I areas.
- Do not focus directly on the amount of progress toward natural visibility conditions as a measure to assess a state's success in the SIP process, instead consider emissions reductions that improve visibility in the 2018-28 planning period, although the natural visibility goal remains the desired outcome of the program.
- Rely on clearly defined procedures and criteria to identify and evaluate sources of haze, to estimate effects on visibility, and to measure progress toward Reasonable Progress goals.
- Simplify and streamline the SIP planning process by setting clear and timely expectations for the structure and contents of the plans as well as the supporting technical information.
- With a shift in focus to measuring a state's reasonable progress, ensure Class I areas with the worst haze or least progress receive special attention.

WRAP technical activities for Regional Haze

- Emissions Development / Analysis for Regional Modeling projections
- Baseline 2011 base year - linkage to most current [2008-12] monitoring averages
- 2018 modeling with updated “rules/permits on the books” to assess actual expected progress toward 2018 RP values already in SIPs
- 2028 modeling with scenario(s) projecting growth/control from 2018-28 (at one scenario will need inclusion of 4-factor-based controls to help states set 2028 RP values
- Regional 4-factor and other Emissions Control Analyses as needed
- Updates and improvements to Technical Support System to deliver planning results so each state can see each other state’s data

2014-18 WESTAR Regional Haze Analysis and Planning Activities leading to July 2018 Regional Haze Plan milestone



- Next Steps –

(and thanks for your attention and support)