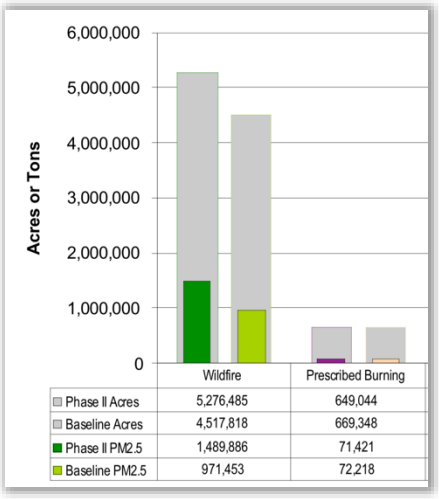
The WRAP provided technical assistance and developed policies to assist western states with developing Regional Haze SIPs during the period 2003–2008. Wildland and agricultural fires were a key source category for the Attribution of Haze Project[1], which apportioned natural and anthropogenic pollution sources impacting Class I Areas.

Once a Base Year (Phase II) fire emissions inventory (EI) was developed[2] for the year 2002, planning year EI's were developed to compare impacts from a Baseline Period against future conditions. These planning EI's were not year-specific, but were meant to provide emissions representative of a multi-year monitoring data period.



For each type of fire (wild, prescribed, and agricultural), WRAP developed methods to determine what level of fire activity best represented the Baseline Period with the Phase II EI used as a starting point. Because of their inherent spatial and temporal variability, wildfires for Phase II were compared against a long-term wildfire climatology to determine if Phase II activity was exceptionally high or low[3]. Prescribed and agricultural fire activity was considered more stable year-to-year, so regional experts were consulted to determine if the Phase II activity was unusual for those two types.

A Future Year fire EI was developed by examining known policy decisions and regulations predicted to affect future activity and/or emissions, and, for each fire type, developing "less," "likely," and "more" datasets that were combined in various ways to explore potential scenarios (e.g. Climate conditions and Maximum Application of Prescribed Fire). Some policy changes were "baked-in," such as the increased use of Emission Reduction Techniques (ERT) for prescribed burning, which scaled emissions downward for the same level of activity.

	Baseline Control-case	Base-case	Climate conditions/ resource limited	Max-App of Rx Fire
WF	Baseline	LIKELY	MORE	LIKELY
WFU	Baseline	LIKELY	MORE	LIKELY
Rx	Baseline w/ERT	LIKELY	LESS	MORE
NFR	Baseline	LIKELY	LIKELY	LIKELY
Ag	Baseline w/ERT	LIKELY	LIKELY	LIKELY

For datasets that were scaled up ("more"), virtual events were created at centroids of modeling grid squares and given the metadata attributes of the centroid coordinates. Size, timing, and grid square was determined by using averages from the size, temporal, and spatial distributions of fires in the Phase II dataset (e.g., the average acres within a size bin, or the average number of events in a given month).

Development of ERT scalars and the magnitude of activity changes for the Future Year datasets relied on input from regional FLMs and other fire experts. For the 2021 SIP update planning process, consideration of future fire conditions will begin by convening a technical subcommittee of the Fire and Smoke Workgroup to determine the scenarios to consider (e.g., climate-affected, increased prescribed burning). Scaling of fire activity and emissions is proposed to be done in a similar manner as described here.

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[1] https://www.wrapair.org/forums/aoh/index.html

[2] See Base Year Fire Emissions for Regional Haze whitepaper. "Phase II" is used here to be consistent with the chart comparing acres and emissions between the Base Year and Baseline Period.

[3] https://www.wrapair.org/forums/fejf/documents/task7/Phase3-4EI/WRAP_Fire_Ph3-4_EI_Report_20070515.pdf