



*Supplement of*

**The Western United States MTBS-Interagency database of large wildfires, 1984–2024 (WUMI2024a)**

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Table S1. Attribute names (left) and descriptions (right) provided in the lists of WUMI2024a wildfire events.

fireid	Unique fire identifier indicating date (YYYYMMDD) followed by latitude in degrees north times 10000 followed by longitude in degrees west times 10000
dataset	Name of the dataset used to retrieve the fire name, start date, and ignition location (mtbs, calfire, wfigs, fpa_fod, or wfaip)
agency	Agency reporting the fire (not available for mtbs fires)
name	Fire name
year	Year of fire start
month	Month of fire start
day	Day of month of fire start
lat	Latitude of ignition
lon	Longitude of ignition
lat_ll	Minimum latitude of fire perimeter (if fire perimeter is available)
lon_ll	Minimum longitude of fire perimeter (if fire perimeter is available)
lat_ur	Maximum latitude of fire perimeter (if fire perimeter is available)
lon_ur	Maximum longitude of fire perimeter (if fire perimeter is available)
poly_area_ha	Reported fire size in hectares (within perimeter area if fire perimeter is available)
burn_area_ha	Area burned (actual area burned within the perimeter if an mtbs fire or a subfire of an MTBS fire with an adjusted area burned)
mtbs_name	Name of the mtbs fire (for fires either in the mtbs dataset or non-mtbs subfires that are part of an mtbs parent fire)
mtbs_ID	Identification code the mtbs fire (for fires either in the mtbs dataset or non-mtbs subfires that are part of an mtbs parent fire)
irwinid	Integrated Reporting of Wildfire Information (IRWIN) Identification code
FOD_ID	Fire Occurrence Dataset identification codes for fpa_fod fires
FPA_ID	Fire Program Analysis identification codes for fpa_fod fires
object_ID_wfaip	If a wfaip fire, the identification number that can be cross-referenced to the object_id attribute in the original list of wfaip fires provided in fire_lists/wfaip/wfaip_fires_qc.txt
object_ID_fpa_fod	If an fpa_fod fire, the identification number that can be cross-referenced to the object_id attribute in the original list of fpa_fod fires provided in fire_lists/fpa_fod/fpa_fod_fires_qc.txt
object_ID_wfigs	If a wfigs fire, or an fpa_fod fire that was matched to a wfigs fire, the identification number that can be cross-referenced to the object_id attribute in the original list of wfigs fires provided in fire_lists/wfigs/wfigs_fires_qc.txt
object_ID_calfire	If a calfire fire, or a non-calfire fire that was matched to or part of a calfire fire, the identification number that can be cross-referenced to the object_id attribute in the original list of calfire fires provided in fire_lists/calfire/calfire_fires_qc.txt
object_ID_usgs	If matched to a usgs fire, the identification number that can be cross-referenced to the object_id attribute in the original list of calfire fires provided in fire_lists/usgs/usgs_fires_qc.txt
object_ID_iafph	If matched to an iafph fire, the identification number that can be cross-referenced to the object_id attribute in the original list of calfire fires provided in fire_lists/usgs/usgs_fires_qc.txt
cause_human_or_natural	General ignition cause if available, HUMAN or NATURAL
cause_specific	Specific ignition cause if available

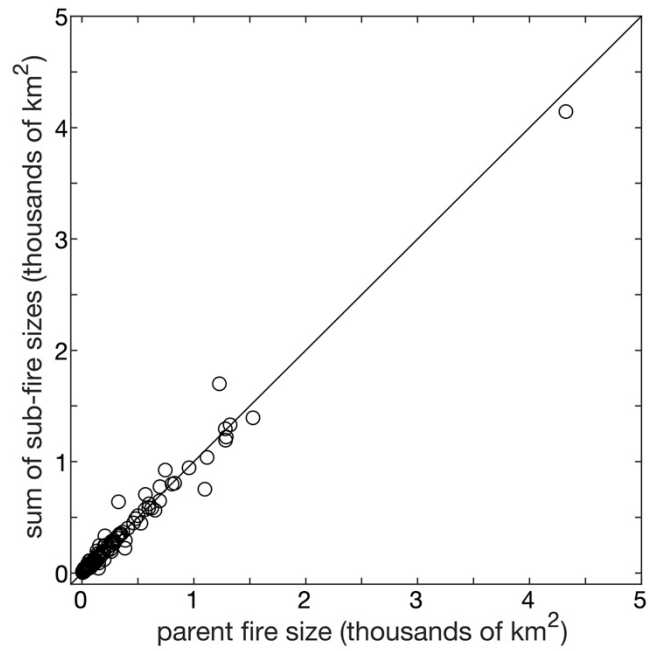


Figure S1. Scatter plot comparing the sums of sub-fire sizes to the sizes of their corresponding parent fires. Dots represent each of 119 cases in which a single MTBS parent fire was found to be composed of two or more non-MTBS sub-fires. The diagonal black line is a one-to-one line.

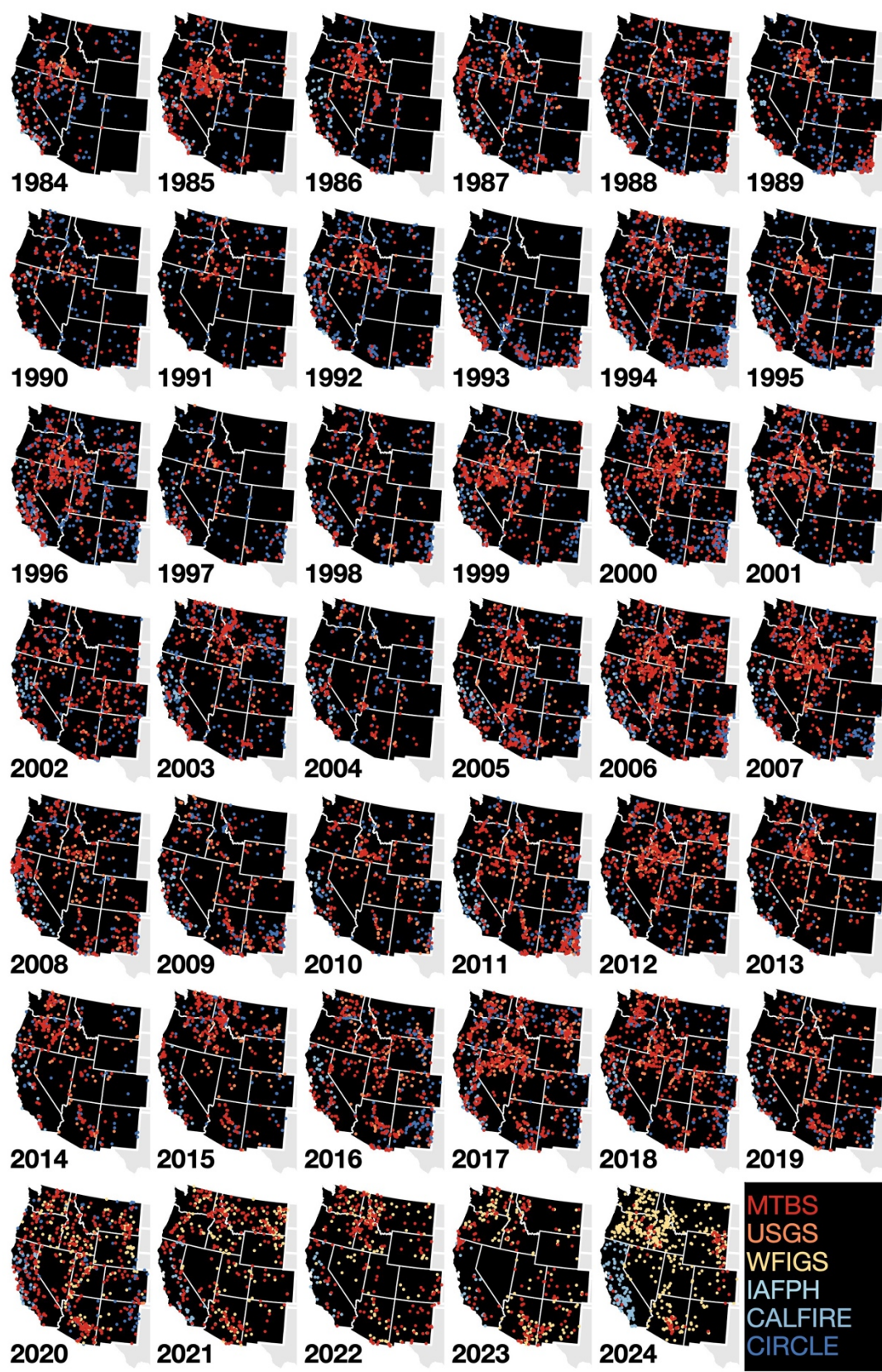


Figure S2. Annual ignition locations of WUMI2024a wildfires with perimeter data from MTBS, WFIS, CalFire, USGS, or IAFPH, as well as fires lacking perimeter data and assumed circular.

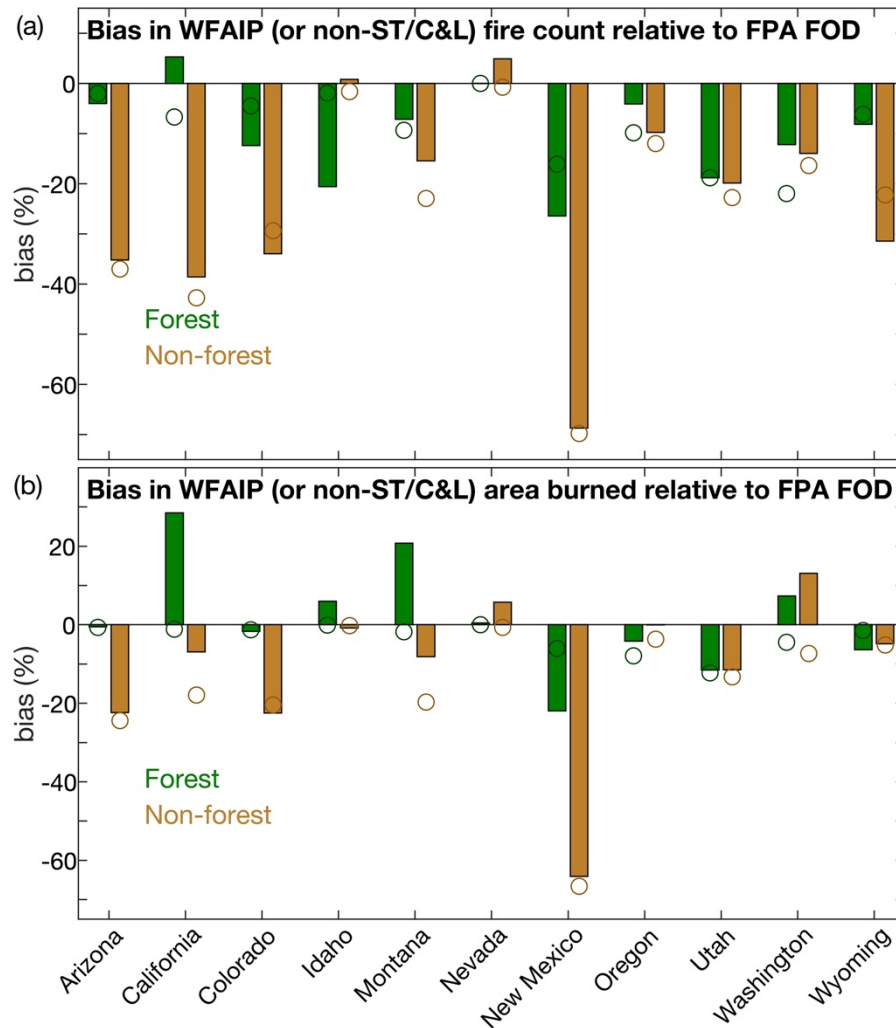


Figure S3. For each of the 11 states in the western United States, the percent bias in (a) frequency of and (b) area burned by wildfires  $\geq 100$  ha in size according to (bars) the Wildland Fire Application Information Portal (WFAIP) dataset relative to the US Forest Service's Fire Program Analysis Fire Occurrence Dataset (FPA FOD) during 1992–2001. Circles indicate the bias in an adjusted version of FPA FOD where fires reported by state, county, and local (ST/C&L) agencies are excluded. Colors indicate wildfires that ignited in (green) forest versus (brown) non-forest areas. The FPA FOD is the more comprehensive and quality-controlled of the datasets, but does not begin until 1992. The relative biases in the WFAIP shown here may be used to guide interpretation of the biases present in the WUMI2024a dataset during the pre-1992 years when FPA FOD data are unavailable. In non-forest areas, the similarity in the biases indicated by bars and circles indicates that most of the biases in the WFAIP dataset are due to a lack of ST/C&L fires. Notably, the biases shown here for California are addressed in the WUMI2024a by use of the CalFire dataset, which does include fires reported by ST/C&L agencies.