

Year 2022 Fires Workgroup Kickoff Meeting

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DECEMBER 12, 2023

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2022 FIRES WORKGROUP

Outline

- Mission of this Workgroup
- Draft version of the fires inventory
 - Activity and Tools used
 - Emissions
- Pile Burns status
- Fire activity submitted by SLTs to be used in next version
- Next steps and update timeline to support 2022 Emissions Modeling Platform

Mission of the 2022 Fires Workgroup

- ▶ The 2022 Fires workgroup is charged with delivering wildfire, prescribed fires and agriculture burn emissions datasets for use in air quality modeling
 - ▶ Criteria Air Pollutants (CAPs) and Hazard Air Pollutants (HAPs)
- ▶ Develop and review technical documentation that describes the methodology used to generate the fire emissions datasets.
- ▶ Perform quality assurance/review of the fire emissions datasets and document any possible improvements that could be made during this Year 2022 effort
- ▶ Focus is on year 2022 base year emissions

Mission of the 2022 Fires Workgroup

Organization info

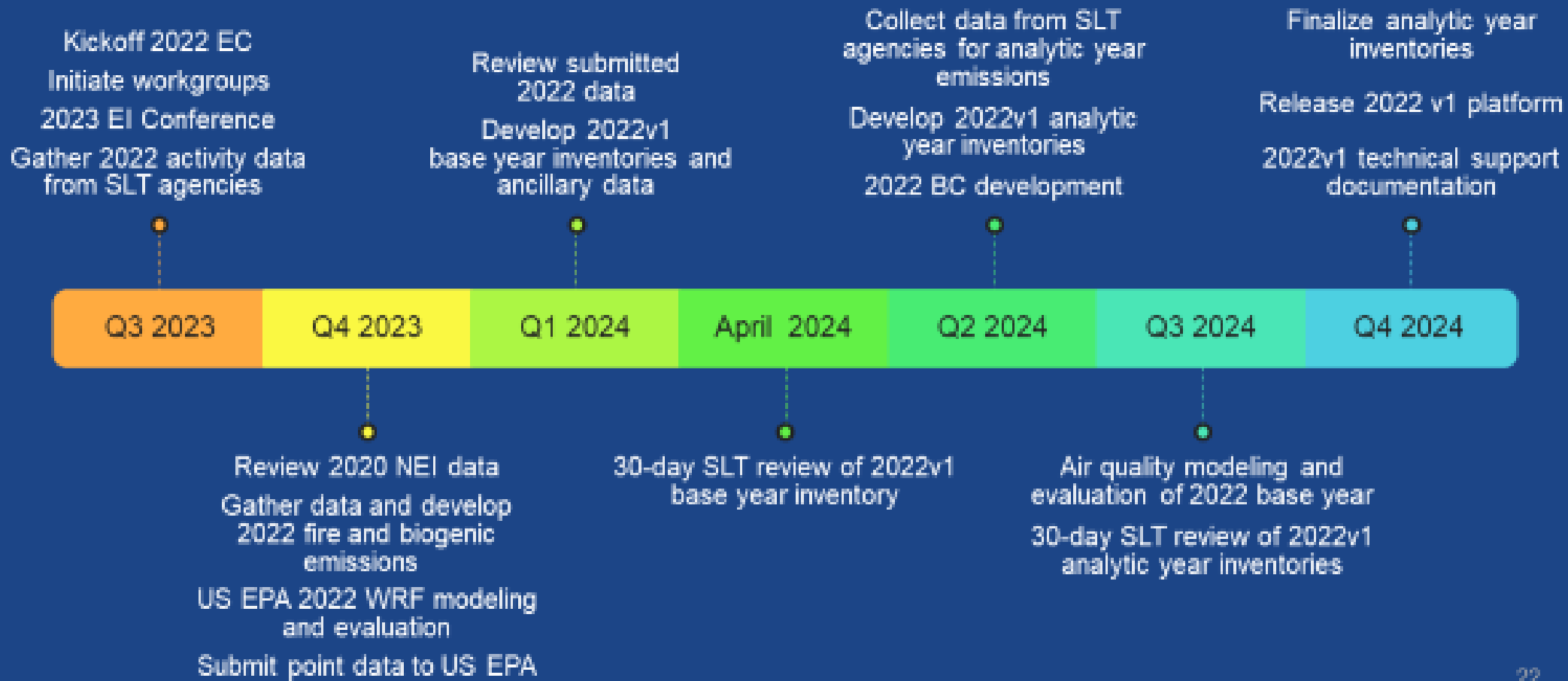
- ▶ The workgroup will be composed of state and EPA staff who are encouraged to review and as necessary improve the fire emissions datasets(s) and documentation to describe the methodologies used to generate the emissions datasets.
- ▶ The workgroup will be led by two chairpersons: one EPA staffer (Jeff Vukovich) and one state/RPO staffer (Rhonda Payne WRAP/WESTAR)
- ▶ The workgroup will likely meet quarterly during the 2022 EMP Collaboration process
- ▶ Workgroup chairpersons will provide progress briefings to the overall 2022 Collaboration team

Mission of the 2022 Fires Workgroup

Documentation info

- ▶ Wiki site for the Workgroup:
<https://views.cira.colostate.edu/wiki/wiki/12211>
- ▶ The Workgroup shall document the methodologies
 - ▶ used to generate the fire emissions dataset
 - ▶ any changes made to the fire emissions datasets during the 2022 Emissions Modeling Platform development
 - ▶ provide documentation of the review/quality assurance process carried out on the fire emissions dataset(s).
- ▶ EPA will be the lead on documentation, but Workgroup members are encouraged to review, add content and edit content during the Collaboration process

Timeline for 2022v1 Platform Development



Timeline for 2022v2 Platform Development



Draft Inventory Information: Activity and Tools Used

2022 Draft inventory

- Released November 22nd and posted here:
<https://gaftp.epa.gov/Air/emismod/2022/draft/fires/>
- Includes wildland, prescribed, and agricultural burn emissions
- Tech memo available summarizing the draft inventory is here:
https://gaftp.epa.gov/Air/emismod/2022/draft/fires/2022EMP_draft_Wildland_and_ag_fires_memo.pdf
- Detailed summaries provided (e.g. fireloc files for each state)
- Used fire activity data from:
 - Federal agencies and some SLTs
- Tools used:
 - Python modified-SMARTFIRE2 used for generating daily acres burned
 - Bluesky Pipeline (BSP) used for daily emissions

Activity data used: Federal agencies

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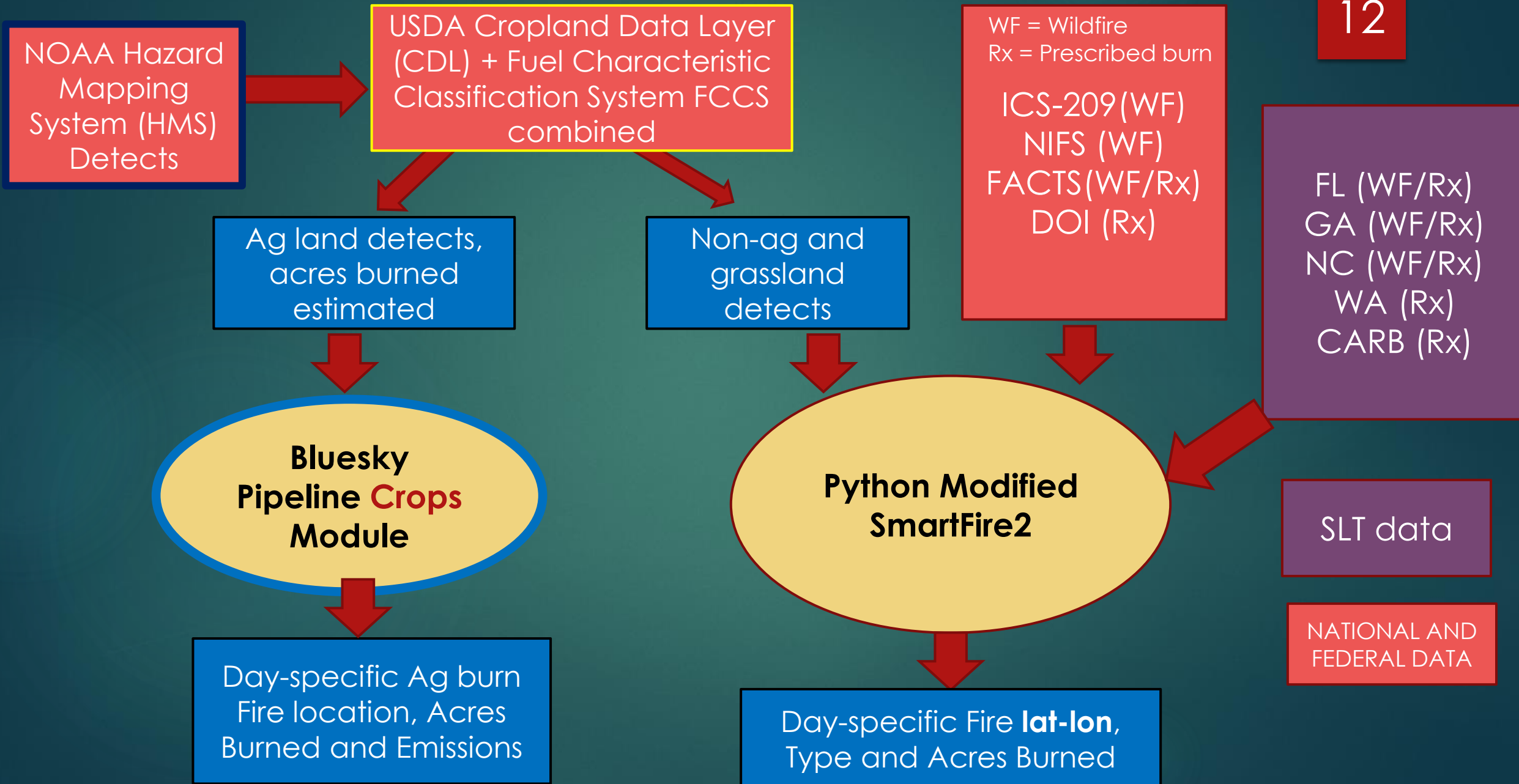
- ▶ **NOAA HMS (Hazard Mapping System)** satellite detection
 - ▶ <https://www.ospo.noaa.gov/Products/land/hms.html>
- ▶ Incident Status Summary reports (**ICS-209**) daily incident report data
 - ▶ <https://famit.nwccg.gov/applications/FAMWeb>
 - ▶ Mainly wildfires
- ▶ Wildland Fire Interagency Geospatial Services (**WFIGS**) Group Fire Perimeter data
 - ▶ Shapefiles acquired from: <https://data-nifc.opendata.arcgis.com/datasets/nifc::wfigscurrent-interagency-fire-perimeters/about>
 - ▶ Mainly wildfires
- ▶ US Forest Service Activity Tracking System (**FACTS**)
 - ▶ Hazardous Fuel Treatment Activity data o 2022 data in tabular format received from USFS directly
 - ▶ Wildfires and Prescribed burns
- ▶ Department of Interior (DOI) fire activity data from National Fire Plan Operations and Reporting System (**NFPORS**)
 - ▶ Sent by DOI via direct communication
 - ▶ Prescribed burns only on DOI lands

Activity data used: State agencies

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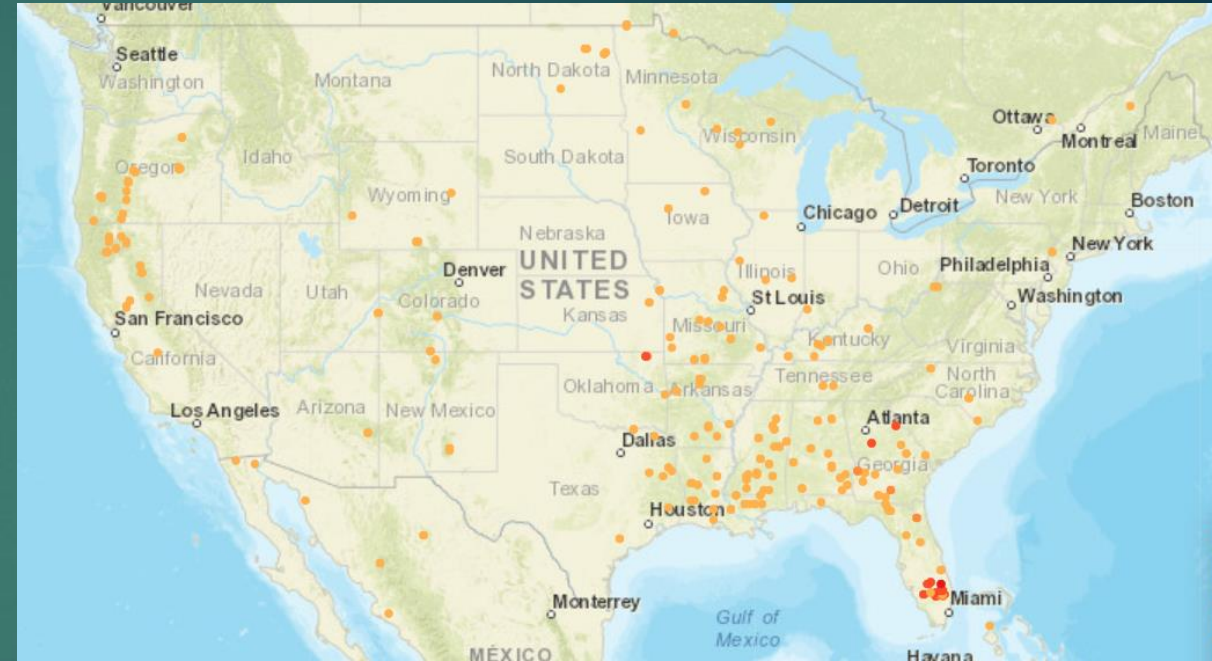
- ▶ California Air Resources Board (CARB) Prescribed Fire Information Reporting System (PFIRS)
 - ▶ Prescribed burns only
- ▶ Georgia Department of Natural Resources fire activity data
 - ▶ Wildfires, prescribed burns, and agricultural burns
- ▶ Florida Department of Environmental Protection fire activity data
 - ▶ Wildfires, prescribed burns, and agricultural burns
- ▶ North Carolina Department of Environmental Quality fire activity data
 - ▶ Wildfires and prescribed burns
- ▶ Kansas Department of Health and Environment: Flint Hills fire activity data
 - ▶ Prescribed burns only
- ▶ Washington Dept. of Ecology: Air Quality Program fire activity data
 - ▶ Pile burns only

Python Smartfire2 and Agriculture burn processing for draft 2022



Hazard Mapping System fire detects

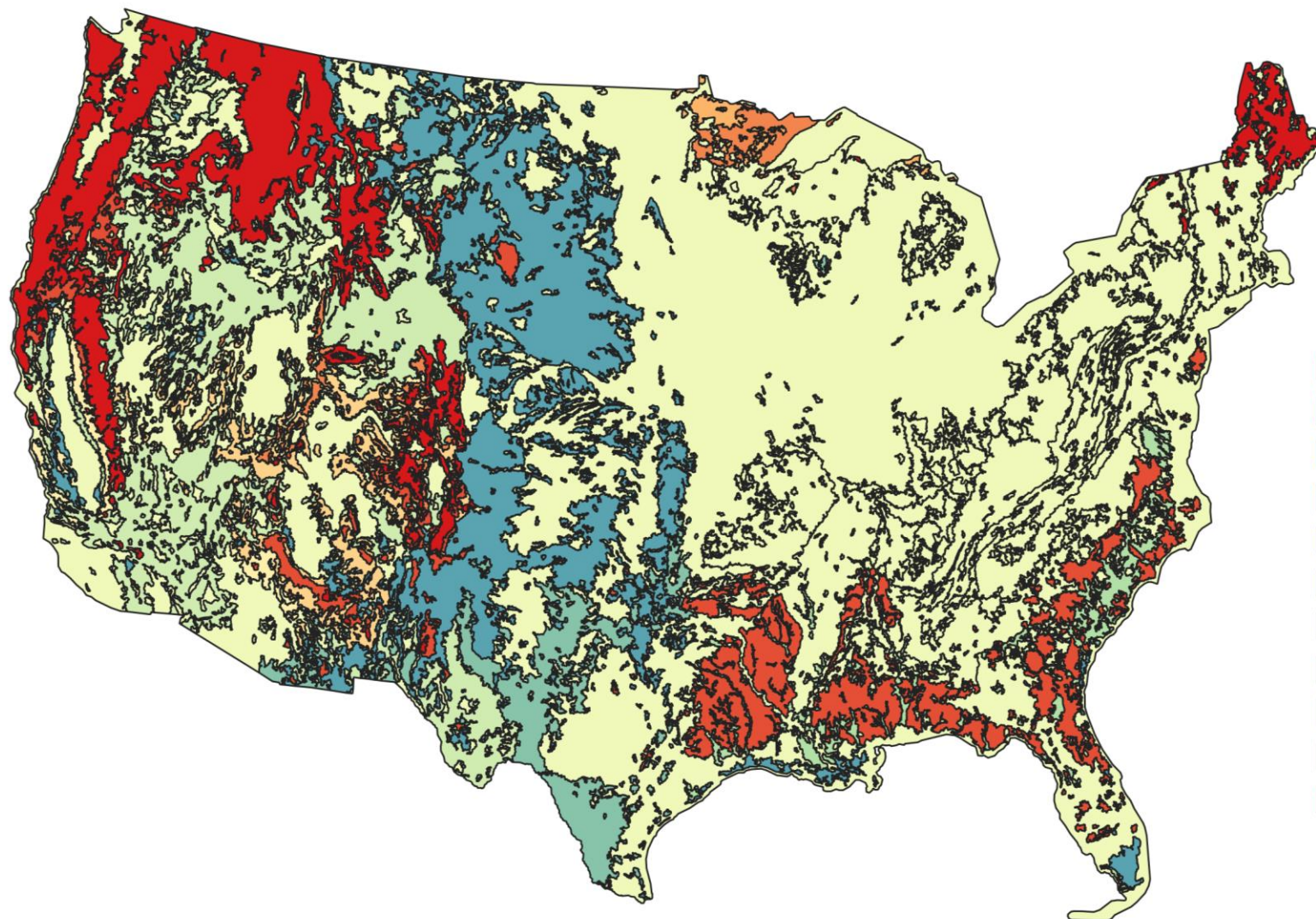
- ▶ Total detects for the year 2022 ~ 1 Million
- ▶ After applying the USDA Cropland Data Layer, about 880,000 detects were labeled as wildland fire and ~ 122,000 detects determined to be on agricultural lands
- ▶ About 21,000 detects determined as taking place during annual Flint Hills prescribed burns (more info on this later in ppt)



2020 NEI Acres Per HMS Detect

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When we don't have actual documented fire activity and have to rely solely on HMS detect



Acres Per HMS Detect

12	Closed Conifer Forest
15	Open Conifer Forests
18	Aspen
22	Boreal
27	Juniper
33	Pacific broadleaved Forest
39	Eastern Deciduous Forest
41	Other
57	Shrubland
59	Riparian
59	Savanna
62	Grassland

Important changes since 2020NEI

- ▶ Moving from using **Fire Emission Production Simulator (FEPSv2)** emissions factors to **Smoke Emissions Reference Application (SERA)** emissions factors in Bluesky Pipeline
- ▶ Specifically estimating emissions for pile burns
 - ▶ Will be calculated outside BSP initially then a specific module(s) added to BSP at a later date for pile burn emissions calculations
- ▶ Crop burn module in Bluesky Pipeline

Bluesky Pipeline (BSP)

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- ▶ US Forest Service has significantly updated the Bluesky Framework and named the new system “Bluesky Pipeline”
- ▶ It is open source at <https://github.com/pnwairfire/bluesky>
- ▶ Currently, BSP version 4.2.13 used at EPA
- ▶ EPA has applied BSP for various other years and projects
 - ▶ 2020 NEI Wildland fire emissions
 - ▶ EQUATES time series
(https://www.epa.gov/cmaq/equates#emissions_modeling)
- ▶ BSP has both SERA and FEPSv2 emissions factors available
- ▶ FEPSv2 factors vary by combustion phase only, limited pollutants
- ▶ SERA factors can vary by phase, fire type, region, fuel type and more pollutants

Smoke Emissions Reference Application (SERA)

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- ▶ SERA is a searchable online database coordinated by the US Forest Service and University of Washington
- ▶ Consists of existing peer-reviewed emission factors (EFs) of 276 known air pollutants
- ▶ Database enables the analysis and summaries of existing EFs, and creation of average EFs to be used in decision support tools for smoke management, including BSP
- ▶ EIAG and AQMG have been using SERA-generated fire inventories in air quality modeling applications for various years 2016-2019, and 2021
- ▶ See CMAS 2023 presentation on SERA vs FEPSv2 at:
https://gaftp.epa.gov/Air/emismod/2022/draft/oilgas/Vukovich.CMAS2023.SERA_Wildland_fire_emissions_impacts_2021.v2.pdf

SMOKE EMISSIONS REFERENCE APPLICATION (SERA)

Emission Factors by Pollutant | Smoke Emissions References

Filter summaries by: Include outliers

Combustion Phase	Burn Type	Platform*	Region	Vegetation Type	EPA Pollutant Category	Slash
<input type="checkbox"/> Flaming <input type="checkbox"/> Residual smoldering <input type="checkbox"/> Smoldering <input type="checkbox"/> Unspecified	<input type="checkbox"/> Broadcast Rx (Field) <input type="checkbox"/> Other (Lab) <input type="checkbox"/> Pile burn (Field) <input type="checkbox"/> Pile burn (Lab) <input type="checkbox"/> Wildfire (Field)	<input type="checkbox"/> Aerostat <input type="checkbox"/> Airborne <input type="checkbox"/> Ground <input type="checkbox"/> Tower	<input type="checkbox"/> North <input type="checkbox"/> Southeast <input type="checkbox"/> West	<input type="checkbox"/> Conifer forest <input type="checkbox"/> Grassland <input type="checkbox"/> Hardwood forest <input type="checkbox"/> Mixedwood forest <input type="checkbox"/> Organic soil <input type="checkbox"/> Other <input type="checkbox"/> Shrubland	<input type="checkbox"/> Air Toxin (TOX) <input type="checkbox"/> Critical Air Pollutant (CAP) <input type="checkbox"/> Greenhouse Gas (GHG) <input type="checkbox"/> Hazardous Air Pollutant (HAP) <input type="checkbox"/> Ozone Depleting Substance (OZD) <input type="checkbox"/> Ozone Precursor (OZP) <input type="checkbox"/> Persistent Bioaccumulative Toxic (PBT)	<input checked="" type="radio"/> Exclude (default) <input type="radio"/> Include <input type="radio"/> Slash-only

► Advanced search

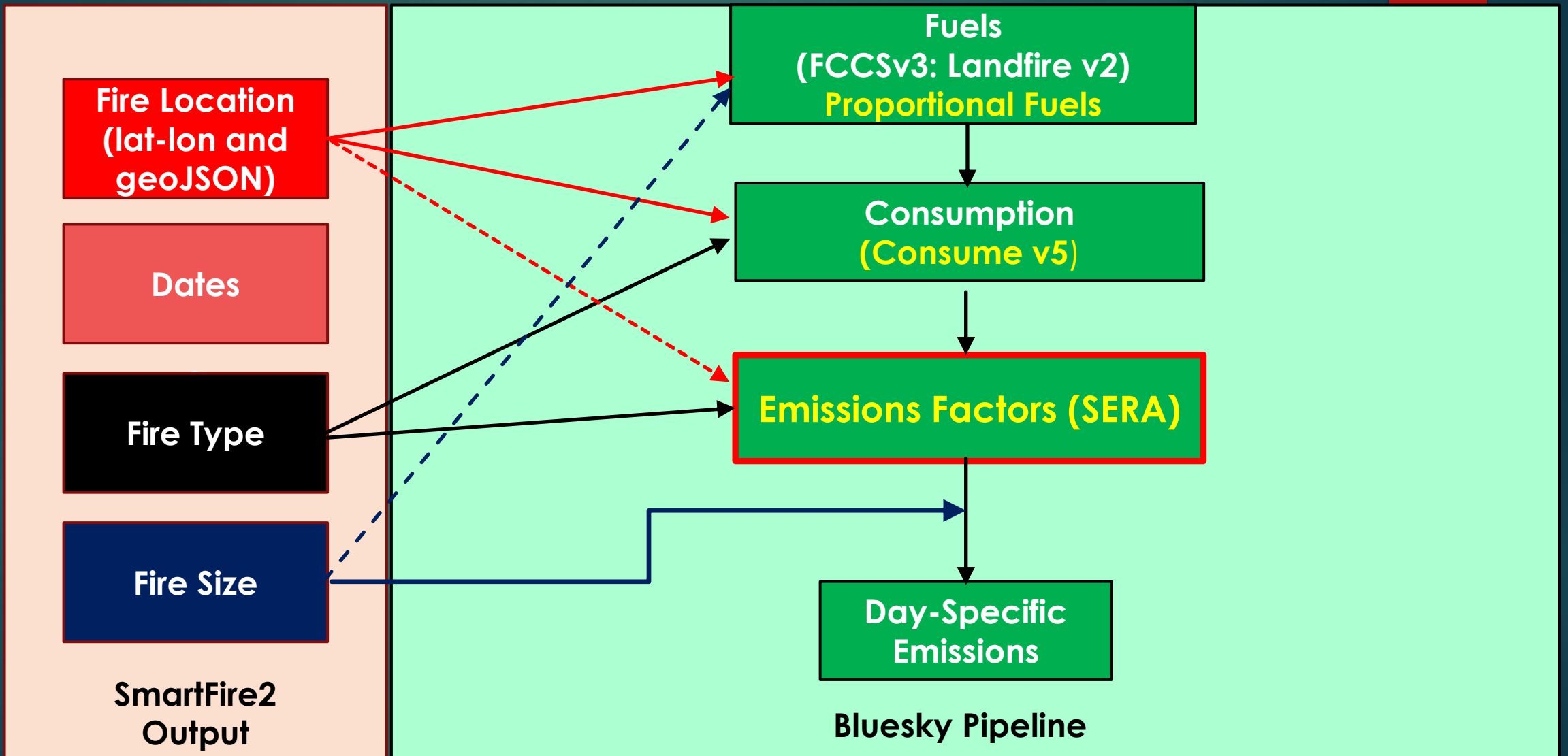
Use checkboxes in the table below to further limit output to selected pollutants.

*Platform applies only to field burns (i.e., broadcast Rx, pile burn, or wildfire). Lab burn + platform will yield 0 records.

[Download this summary table](#) | [Download source EFs for this summary table](#)

Emission Factor Summaries: Showing all 279 pollutants, across all categories (excluding outliers and slash)

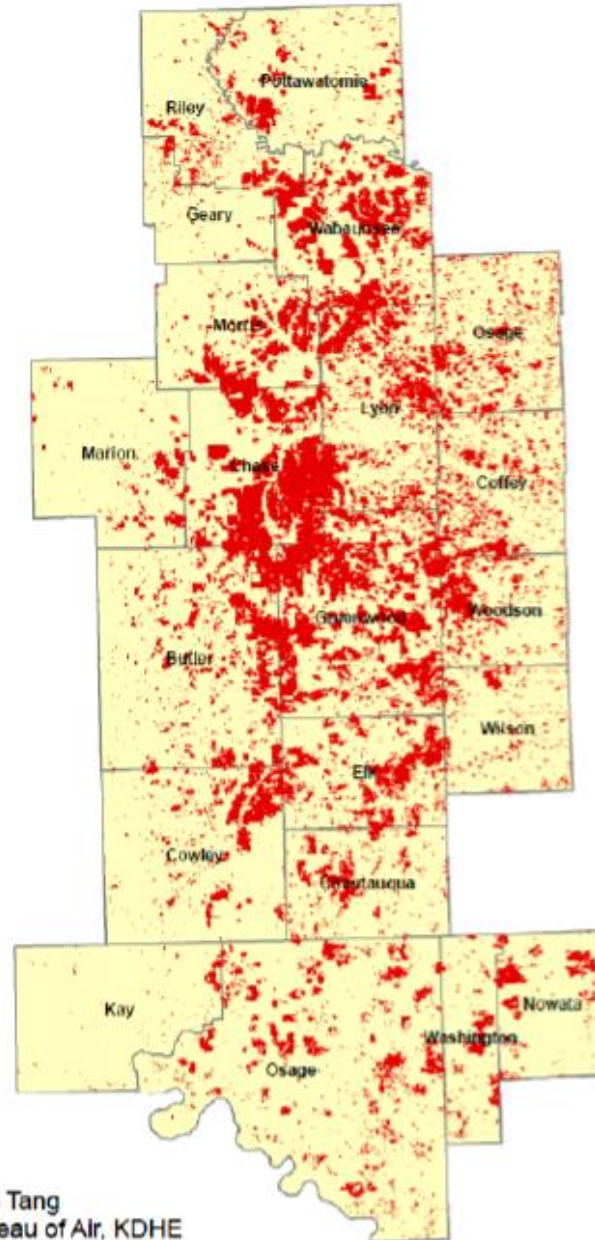
	Pollutant	Formula	Pollutant Category	Molecular Wt	Count	EF (g/kg) Mean	EF (g/kg) SD	MCE (0-1) Mean	MCE (0-1) SD
Primary Gases/Aerosols									
<input type="checkbox"/>	ammonia	NH ₃	inorganic gases	17.031	199	1.386	1.445	0.910	0.059
<input type="checkbox"/>	carbon dioxide	CO ₂	inorganic gases	44.009	599	1,605.958	154.744	0.906	0.047
<input type="checkbox"/>	carbon monoxide	CO	inorganic gases	28.01	658	98.678	49.264	0.901	0.056
<input type="checkbox"/>	methane	CH ₄		16.043	481	4.657	3.456	0.904	0.047
<input type="checkbox"/>	nitric oxide	NO	nitrogen oxides	30.006	186	2.148	1.600	0.928	0.038



Estimating Area Burned Flint Hills Prescribed Burning Spring 2022

- Calculate emissions outside of BSP
- Use all “Grass” HMS detects in these counties for the time of the prescribed Burning
- Calculate per county acres per HMS detect for this time period. Range 55-155 acres per detect
- 2022 Total number of Flint Hills Detects: 21,747
- Use SERA grass emission factors to estimate pollutants except PM2.5
- PM2.5 from measurements in Flint Hills
Amara Holder: 12.68 g/kg

Flint Hills Acreage Burned (February 14 – April 30, 2022)



<u>County</u>	<u>Acres Burned</u>
Butler	163,895
Chase	237,442
Chautauqua	57,901
Coffey	85,902
Cowley	88,095
Elk	109,933
Geary	17,035
Greenwood	315,605
Lyon	180,190
Marion	37,483
Morris	96,126
Osage (KS)	83,894
Pottawatomie	59,106
Riley	53,700
Wabaunsee	182,259
Wilson	33,592
Woodson	69,422
Nowata (OK)	43,507
Osage (OK)	156,297
Washington (OK)	30,842
Kay (OK)	10,533
Total	2,112,759

Draft Inventory Information: Activity and Emissions Summaries

Contiguous United States (CONUS) Wildfire Season in 2022

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Top 15 Wildfires according to NIFC

Name	State	StartDate	LastRepo	Size InAcres	Cause
Hermits Peak	NM	4/7	10/20	341,735	H
Black	NM	5/13	11/10	325,136	H
Double Creek	OR	8/30	10/21	171,532	L
Moose	ID	7/17	11/10	130,205	H
Cedar Creek	OR	8/4	11/24	127,311	L
Mosquito	CA	9/6	10/23	76,788	H
McKinney	CA	7/29	11/7	60,138	U
Cooks Peak	NM	4/17	5/31	59,359	U
Eastland Complex	TX	3/17	4/6	54,513	U
Borrega	TX	3/30	4/4	51,566	H
Cerro Pelado	NM	4/22	7/11	45,605	H
Road 702	NE	4/22	4/30	44,024	L
2022 SRFLightning Complex	CA	8/5	11/1	41,600	U
Willow Creek	OR	6/28	7/4	40,274	H
Total Top 15 CONUS fires				1,569,786	

- CONUS 4.4 M acres
- Quieter season chosen for regulator modeling platform
- Recent avg is about 7M acres for CONUS
- NM most active
- Alaska wildfires burned over 3M acres in 2022

CONUS Totals in 2022 Draft version

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Variable	Wildfires	Prescribed burns	Total
ACRES BURNED	4,064,137	14,380,363	18,444,501
CO	5,617,040	8,453,683	14,070,723
NH3	61,362	97,053	158,415
NOX	62,437	155,284	217,721
PM10	1,360,493	1,573,087	2,933,580
PM2_5	1,256,350	1,359,391	2,615,741
SO2	62,229	96,321	158,550
VOC	1,742,786	2,179,027	3,921,813

Emissions
in tons

NIFC Wildfire total for
CONUS ~ 4.4M acres

Prescribed fire activity in draft
Flint Hills ~ 2.1 M acres
GADNR ~ 1.3 M acres
FLDEP ~ 1.3M acres
DOI ~ 0.6M acres
USFS ~ 1M acres

Acres Burned: Top 10 states by fire type

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Top 10 Wildfires: NIFC vs 2022 Draft Acres Burned

State	NIFC Total	2022 Draft	NIFC-Draft
New Mexico	859,906	633,414	226,492
Texas	671,800	581,784	90,016
Oregon	456,082	454,506	1,576
Idaho	436,733	437,555	-822
Oklahoma	385,133	237,937	147,196
California	309,287	370,766	-61,479
Washington	173,659	215,146	-41,487
Florida	164,774	148,953	15,821
Montana	137,509	135,353	2,156
Arizona	124,165	165,937	-41,772
TOTAL	3,719,048	3,381,352	337,696

Top 10 Prescribed Burns Acres Burned

State	Acres Burned
Kansas	2,396,908
Texas	1,748,310
Florida	1,409,050
Georgia	1,328,540
Oklahoma	1,130,886
Alabama	898,014
Louisiana	726,473
Arkansas	597,967
Missouri	595,241
Mississippi	514,540
TOTAL	11,345,929

CONUS emissions by combustion phase by fire type

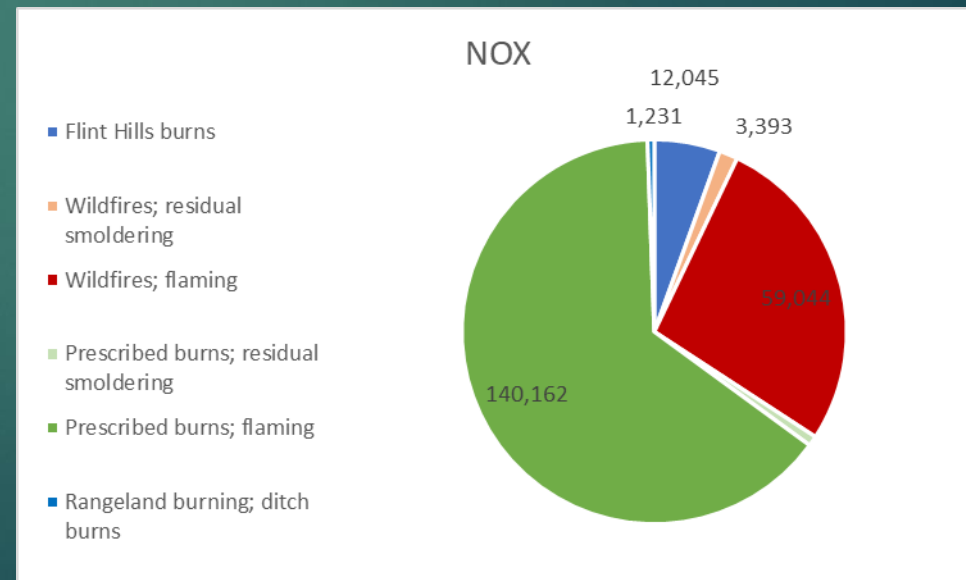
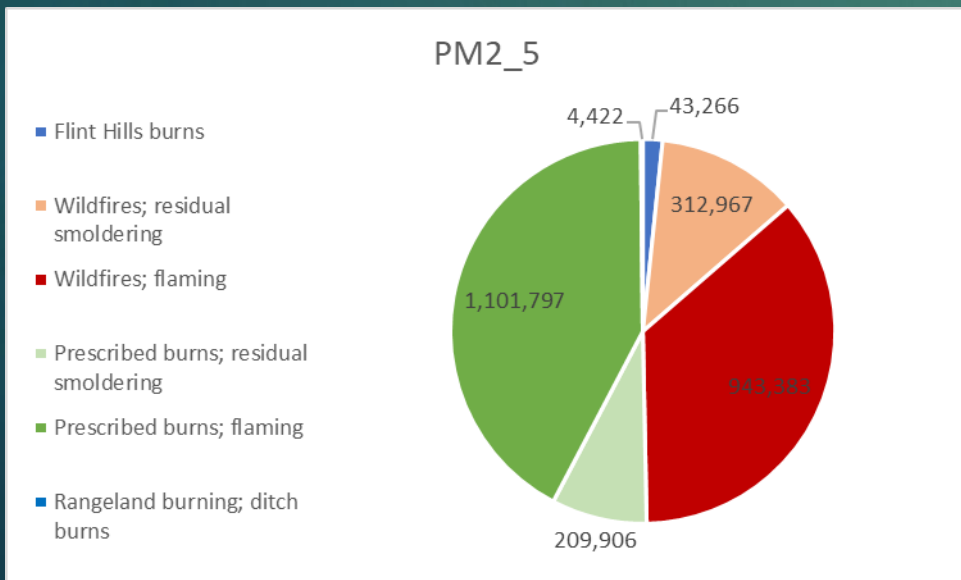
25

Wildfire emissions	Flaming (tons)	% of total from flaming	Residual smoldering (tons)	% of total from residual smoldering	Total (tons)
CO	3,392,387	60.4%	2,224,653	39.6%	5,617,040
NH3	46,985	76.6%	14,377	23.4%	61,362
NOX	59,044	94.6%	3,393	5.4%	62,437
PM10	991,297	72.9%	369,197	27.1%	1,360,493
PM2_5	943,383	75.1%	312,967	24.9%	1,256,350
SO2	54,092	86.9%	8,137	13.1%	62,229
VOC	1,254,156	72.0%	488,630	28.0%	1,742,786

Prescribed burn emissions	Flaming (tons)	% of total from flaming	Residual smoldering (tons)	% of total from residual smoldering	Total (tons)
CO	6,969,768	82.4%	1,483,915	17.6%	8,453,683
NH3	88,895	91.6%	8,157	8.4%	97,053
NOX	153,437	98.8%	1,846	1.2%	155,284
PM10	1,325,475	84.3%	247,611	15.7%	1,573,087
PM2_5	1,149,485	84.6%	209,906	15.4%	1,359,391
SO2	92,053	95.6%	4,268	4.4%	96,321
VOC	1,860,945	85.4%	318,082	14.6%	2,179,027

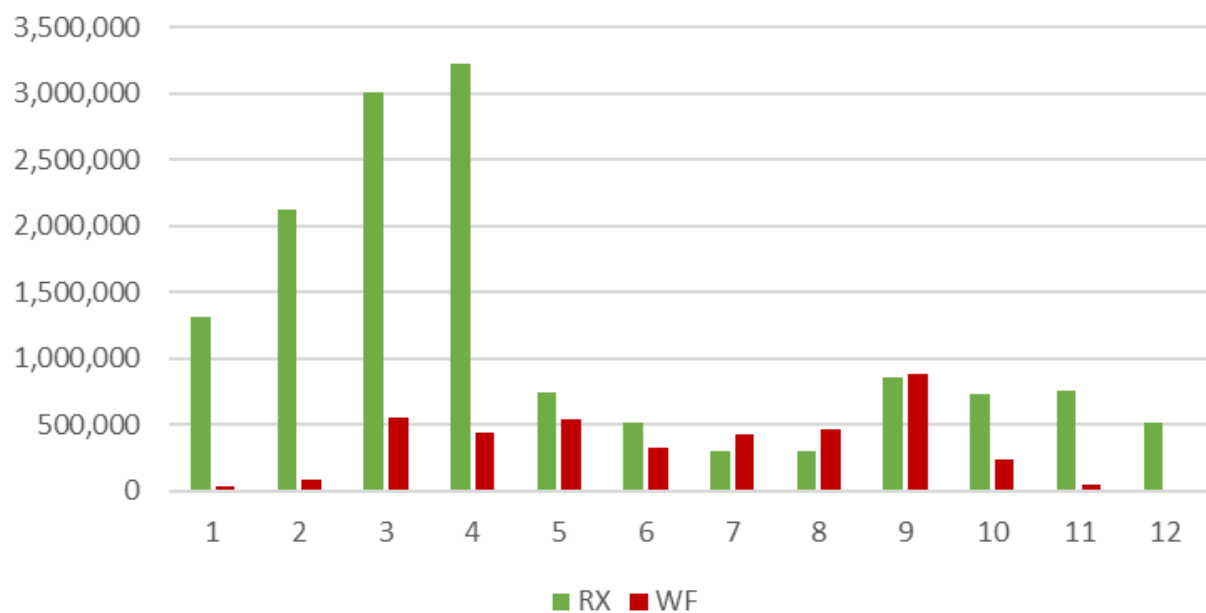
CONUS totals by SCC

SCC	Description	ACRES BURNED	CO	NH3	NOX	PM10	PM2_5	SO2	VOC
2801500171	Flint Hills burns	2,112,759	219,194	3,105	12,045	45,014	43,266	4,299	73,786
2810001001	Wildfires; residual smoldering	0	2,224,653	14,377	3,393	369,197	312,967	8,137	488,630
2810001002	Wildfires; flaming	4,064,137	3,392,387	46,985	59,044	991,297	943,383	54,092	1,254,156
2811015001	Prescribed burns; residual smoldering	0	1,483,915	8,157	1,846	247,611	209,906	4,268	318,082
2811015002	Prescribed burns; flaming	12,051,679	6,728,173	85,473	140,162	1,275,862	1,101,797	87,314	1,779,618
2811020002	Rangeland burning; ditch burns	215,925	22,402	317	1,231	4,600	4,422	439	7,541
TOTAL		18,444,501	14,070,723	158,415	217,721	2,933,580	2,615,741	158,550	3,921,813

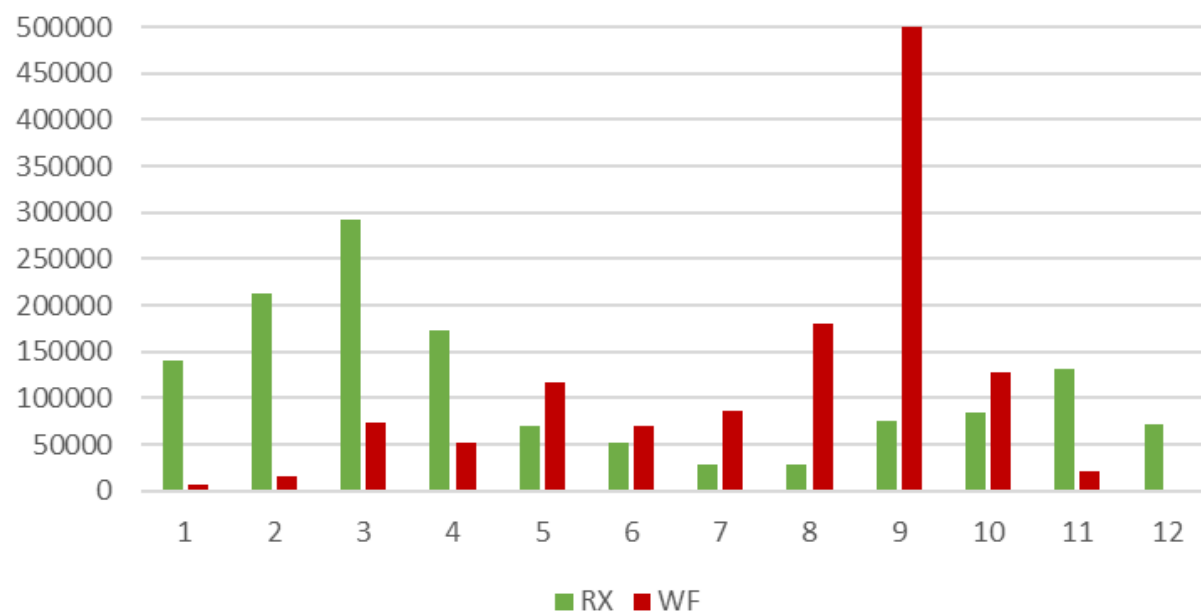


Monthly fire type analysis for CONUS

Acres burned by month by fire type



PM2.5 emissions (tons) by month

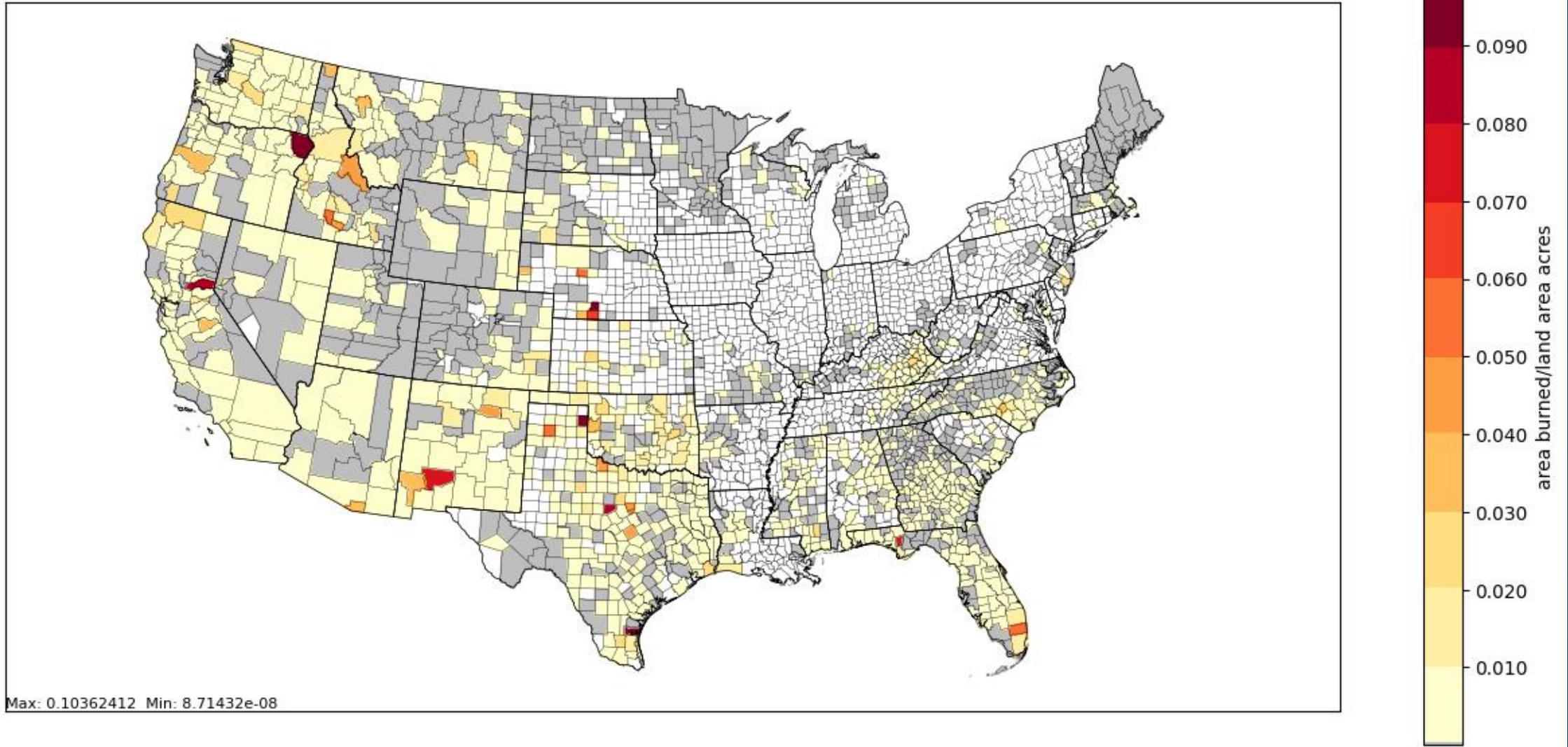


Situations where all we have for activity is HMS satellite information

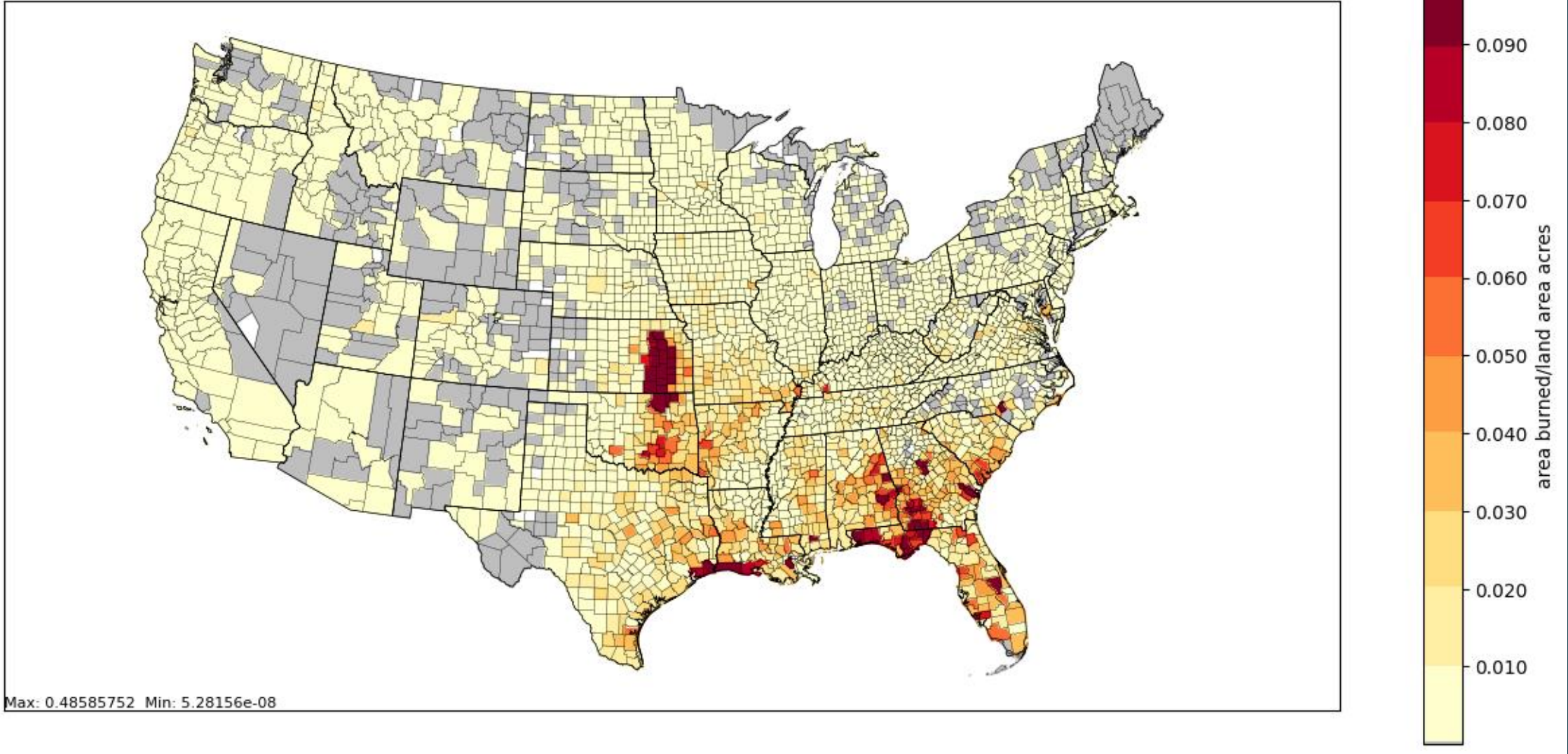
Fire Type	Total Acres Burned	HMS satellite detect only (acres)	Reconciled with activity data (acres)	% not reconciled with any activity
Prescribed burns	14,380,363	8,267,916	6,112,447	57.5%
Wildfires	4,064,137	175,039	3,889,098	4.3%

State	HMS satellite detect only (acres)	Total Prescribed burn acres	% HMS only reconciled
Texas	1,587,569	1,748,310	90.8%
Oklahoma	844,507	1,130,886	74.7%
Alabama	816,504	898,014	90.9%
Louisiana	639,954	726,473	88.1%
Missouri	570,684	595,241	95.9%
Kansas	520,364	2,396,908	21.7%
Arkansas	486,099	597,967	81.3%
South Carolina	380,825	431,002	88.4%
Mississippi	353,550	514,540	68.7%
Iowa	218,689	229,933	95.1%

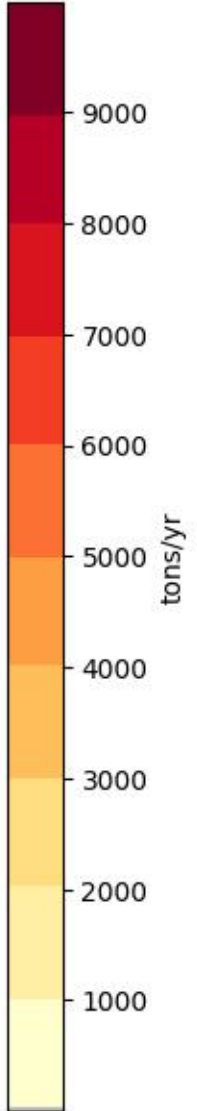
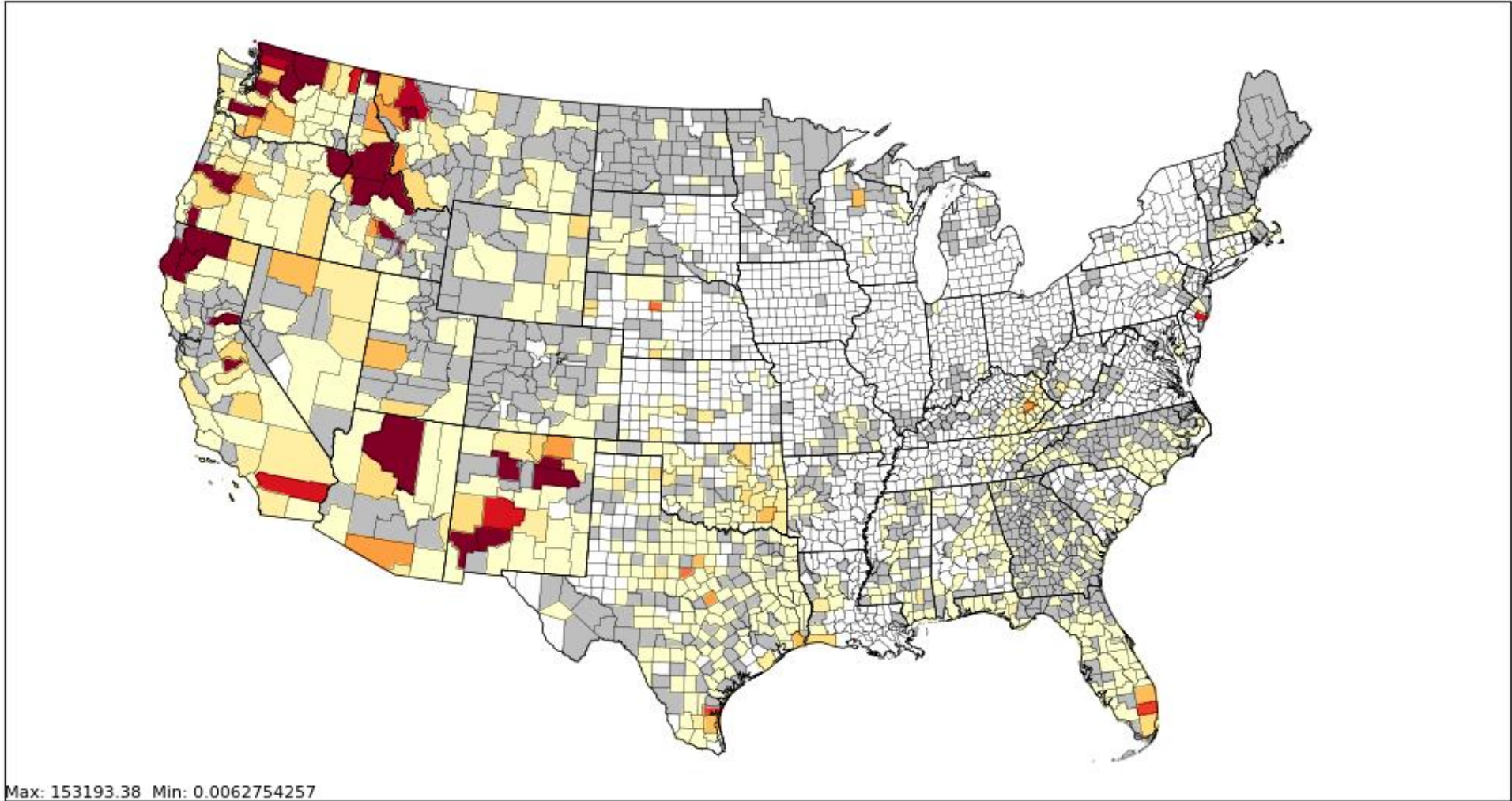
2022 draft Wildfire acres burned density by county



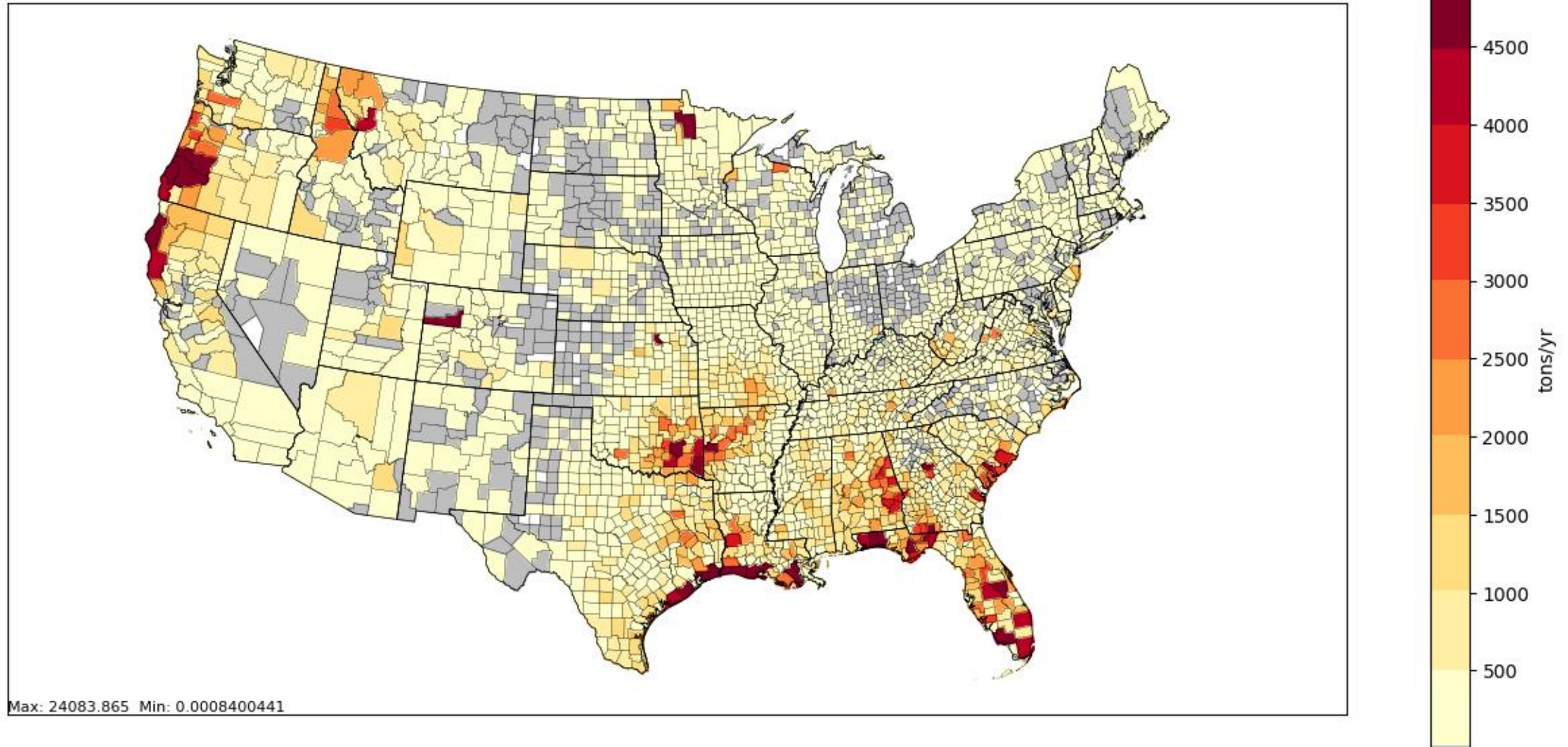
2022 draft Prescribed burns acres burned density by county



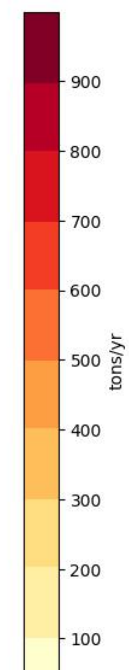
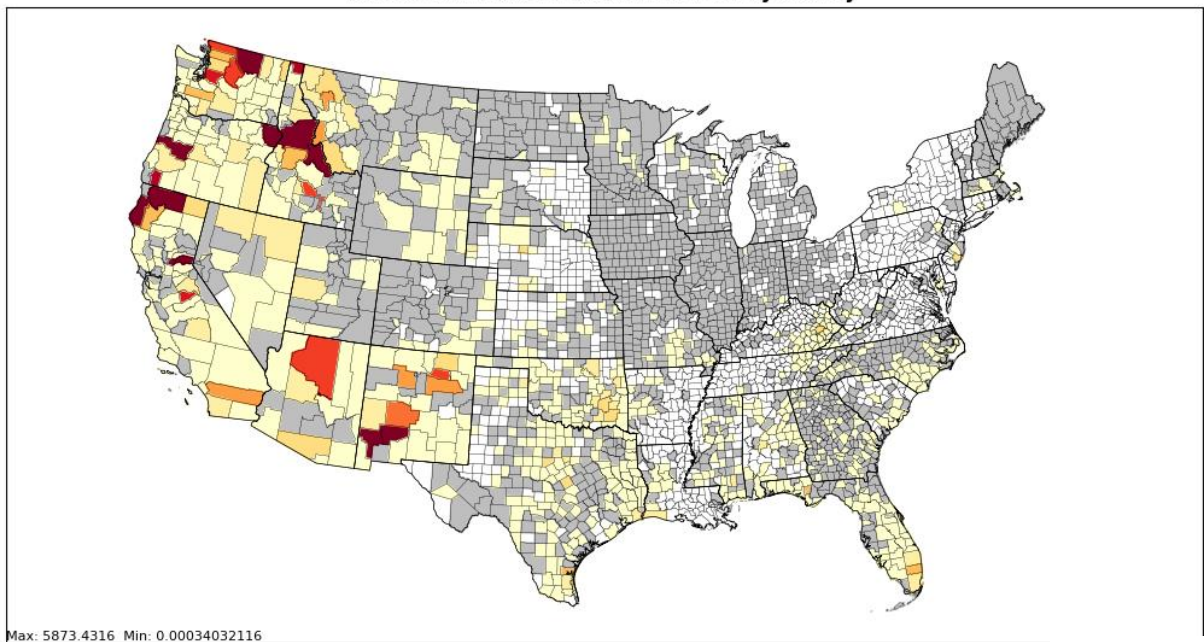
2022 draft Wildfire PM2.5 emissions by county



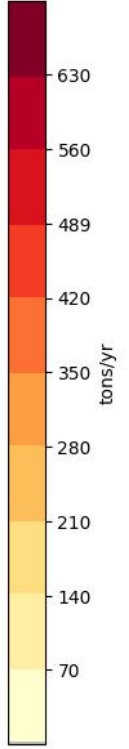
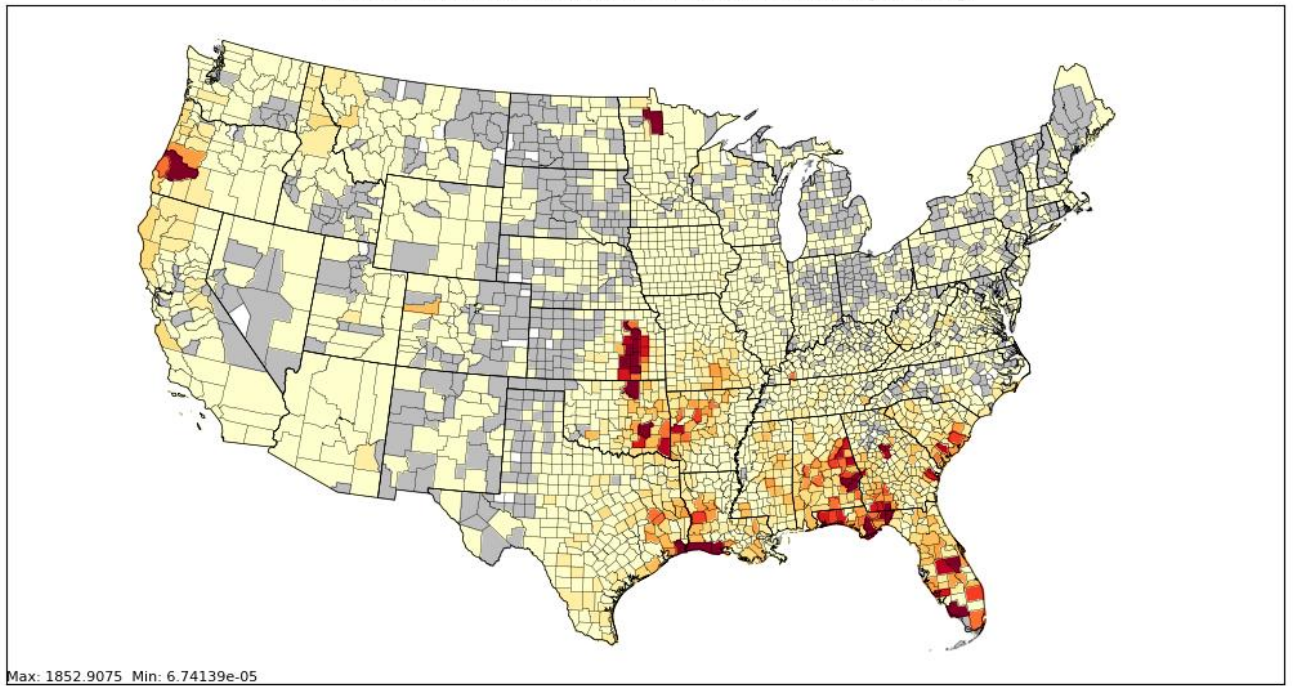
2022 draft Prescribed burns PM2.5 emissions by county



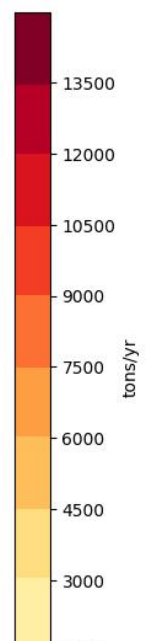
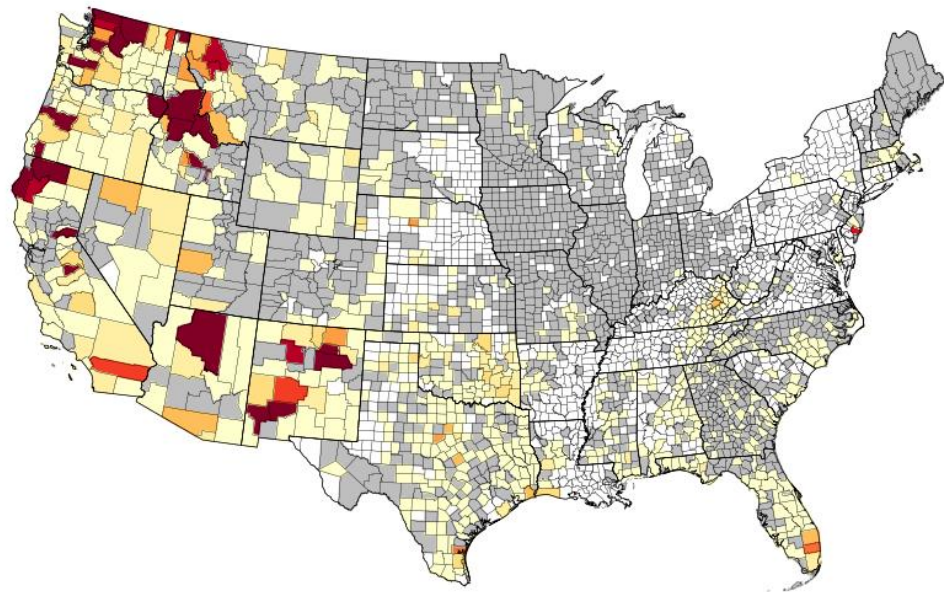
2022 draft Wildfire NOX emissions by county



2022 draft Prescribed burns NOX emissions by county

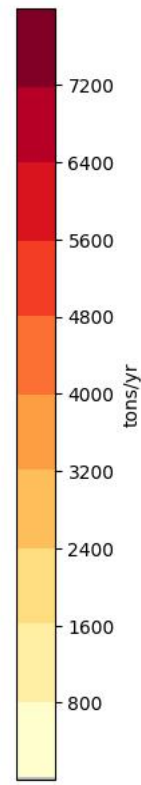
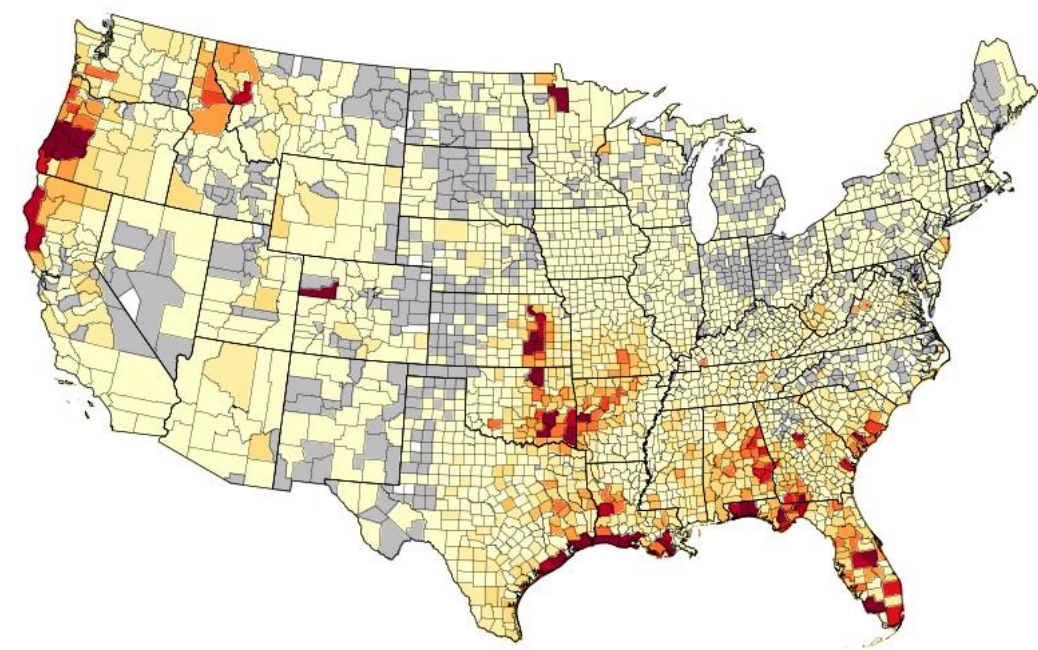


2022 draft Wildfire VOC emissions by county



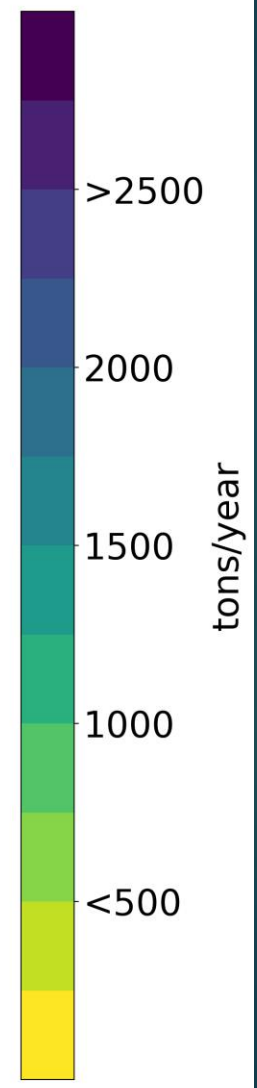
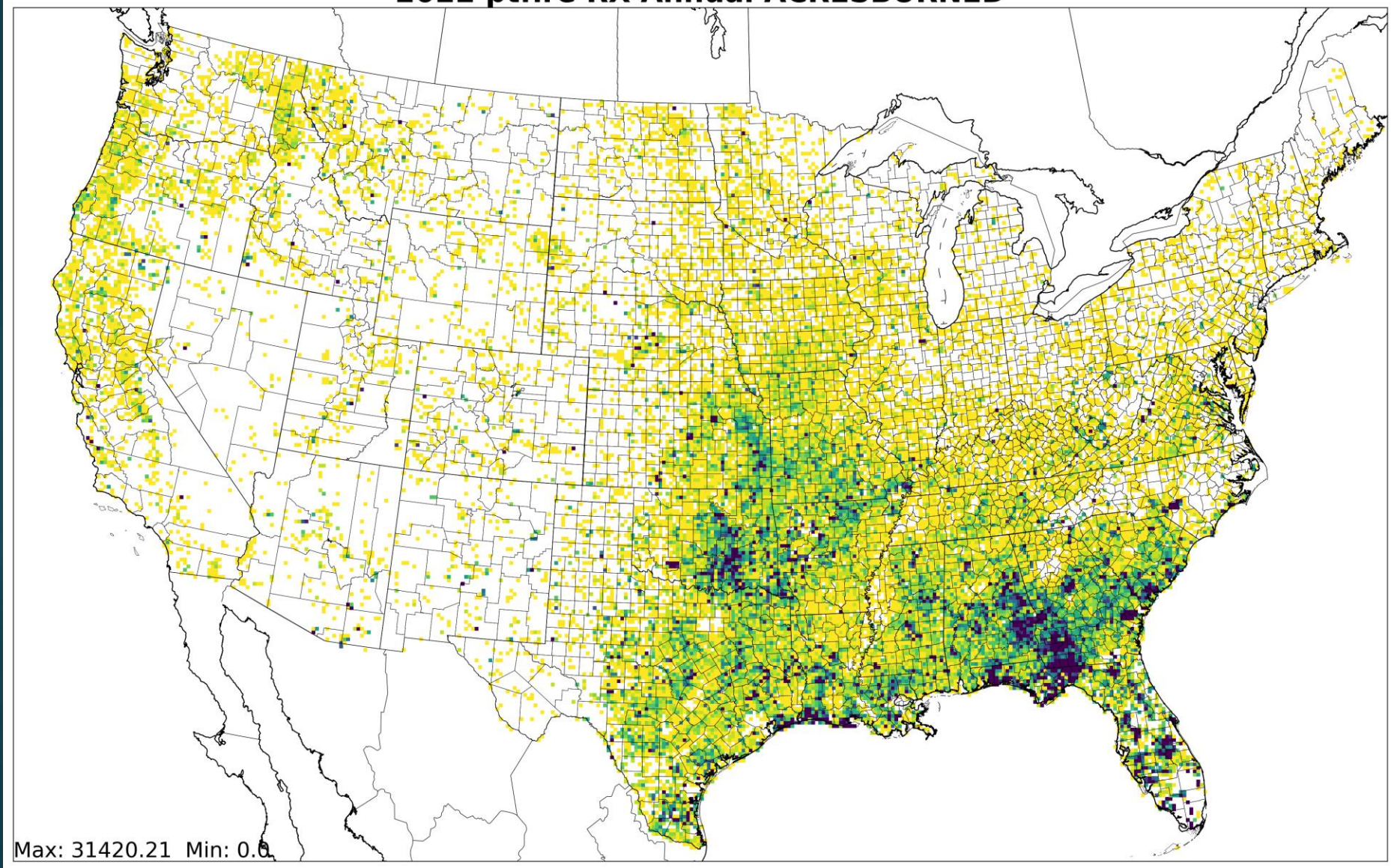
Max: 210472.84 Min: 0.008175914

2022 draft Prescribed burns VOC emissions by county

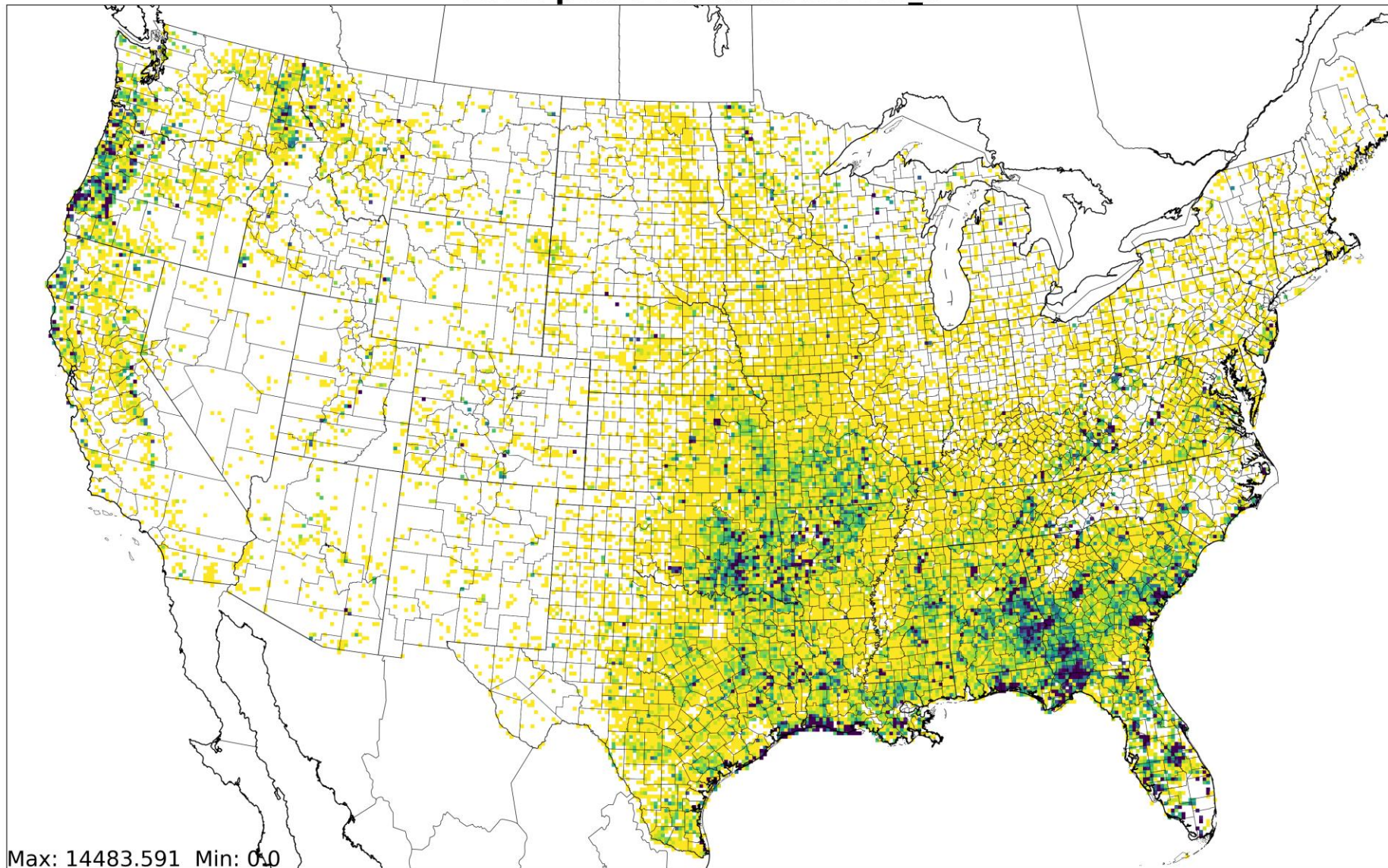


Max: 37798.45 Min: 0.0012897091

2022 ptfire RX Annual ACRESBURNED

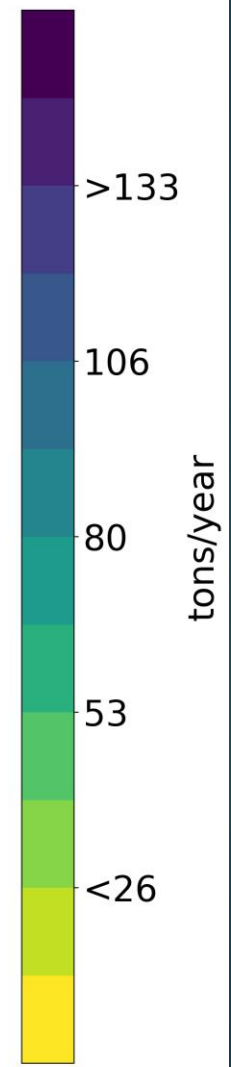
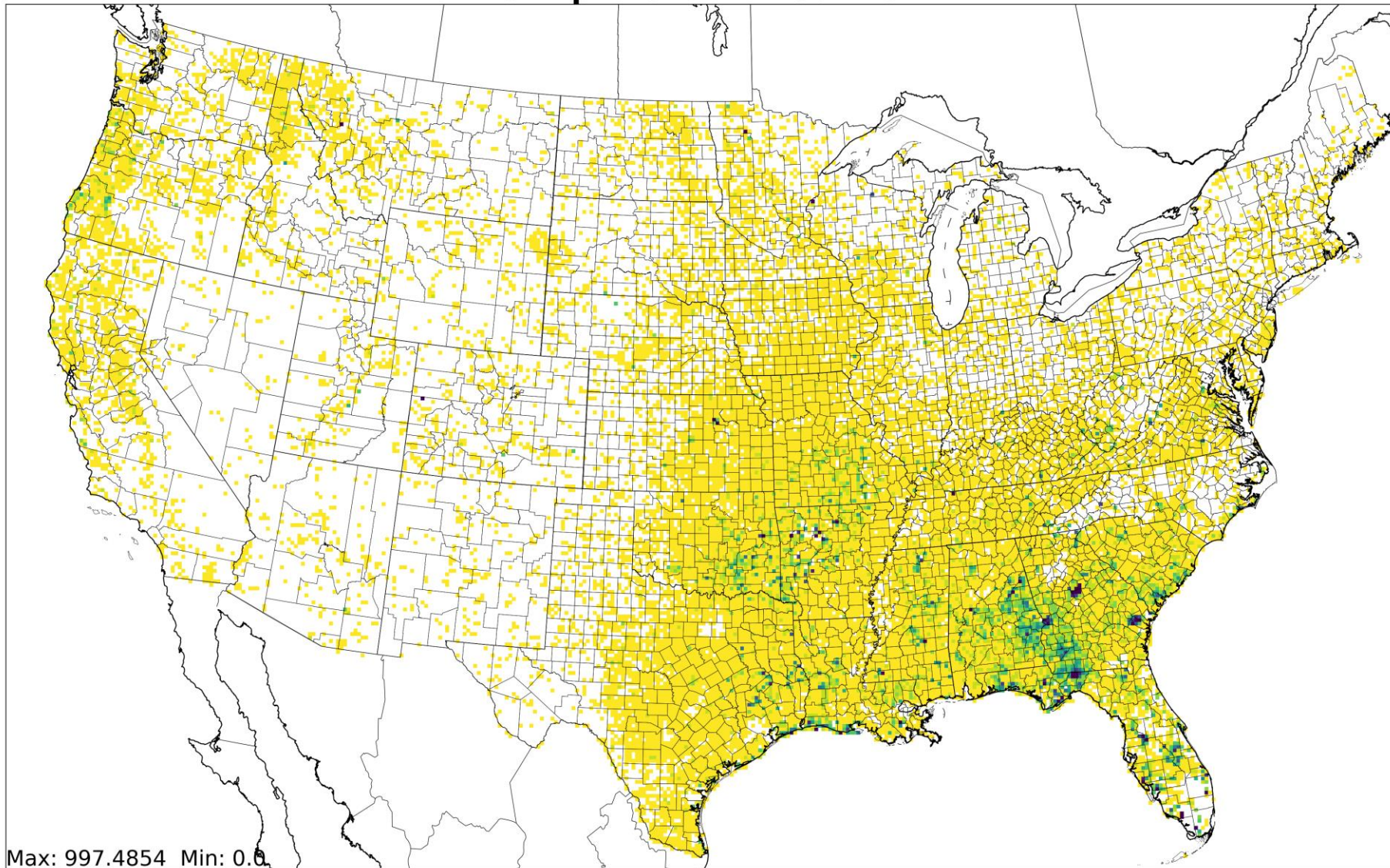


2022 ptfire RX Annual PM2.5



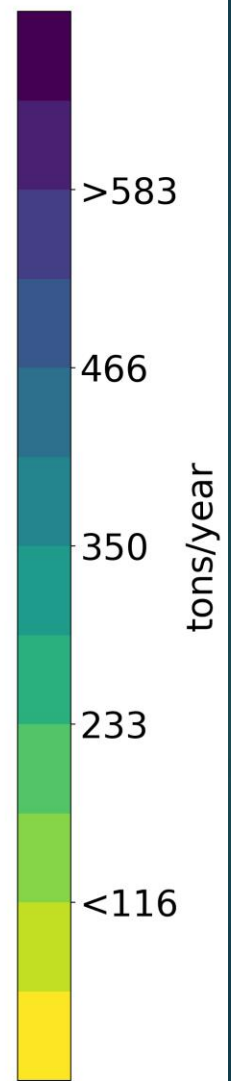
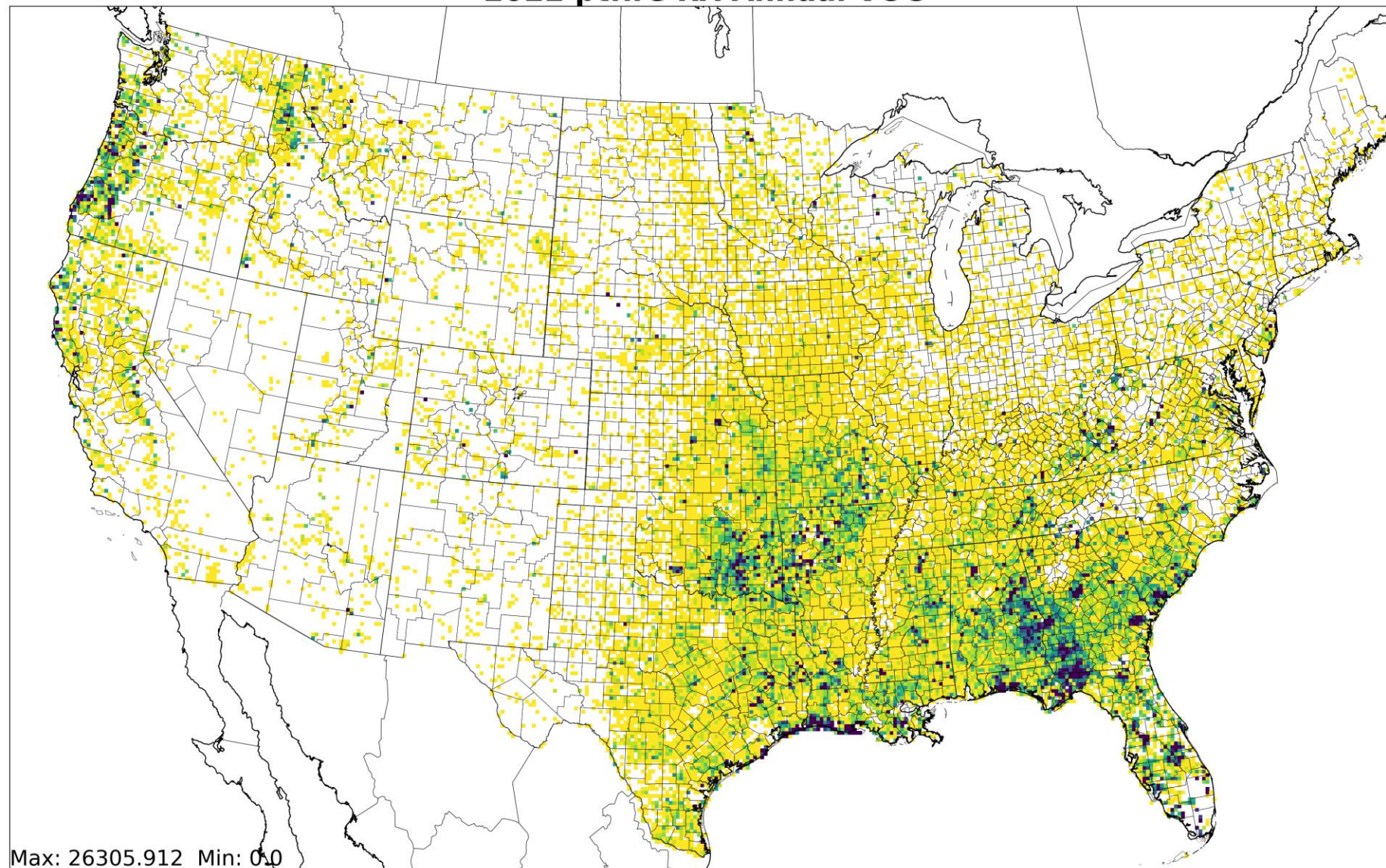
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2022 ptfire RX Annual NOX



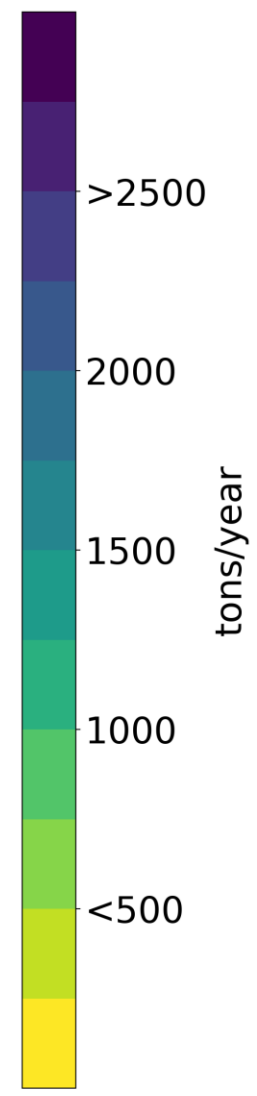
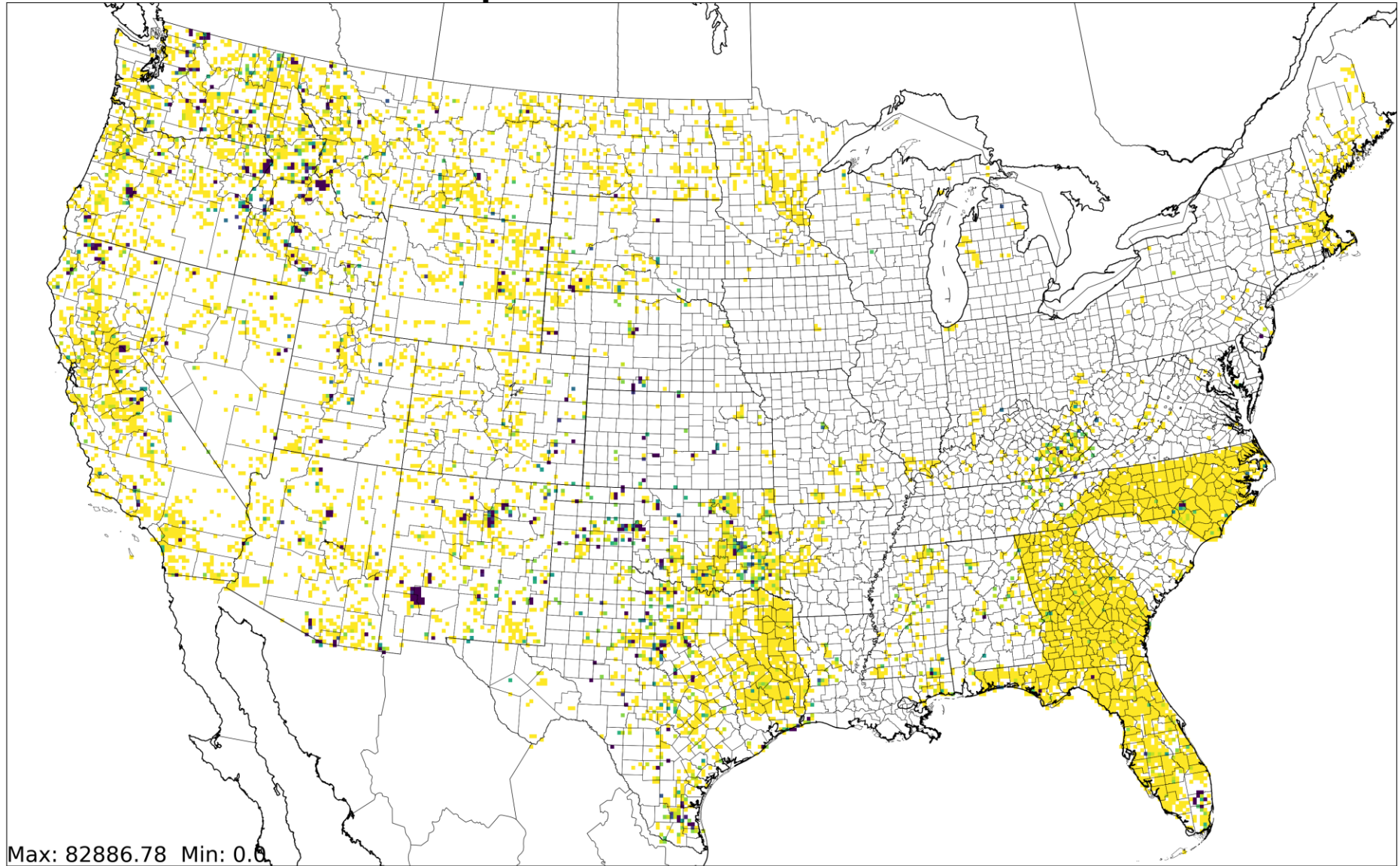
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2022 ptfire RX Annual VOC



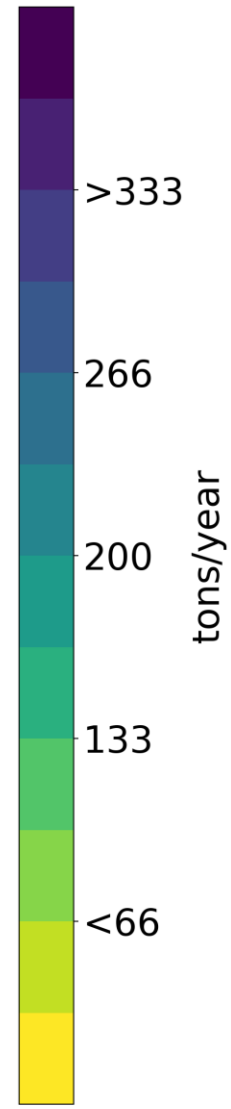
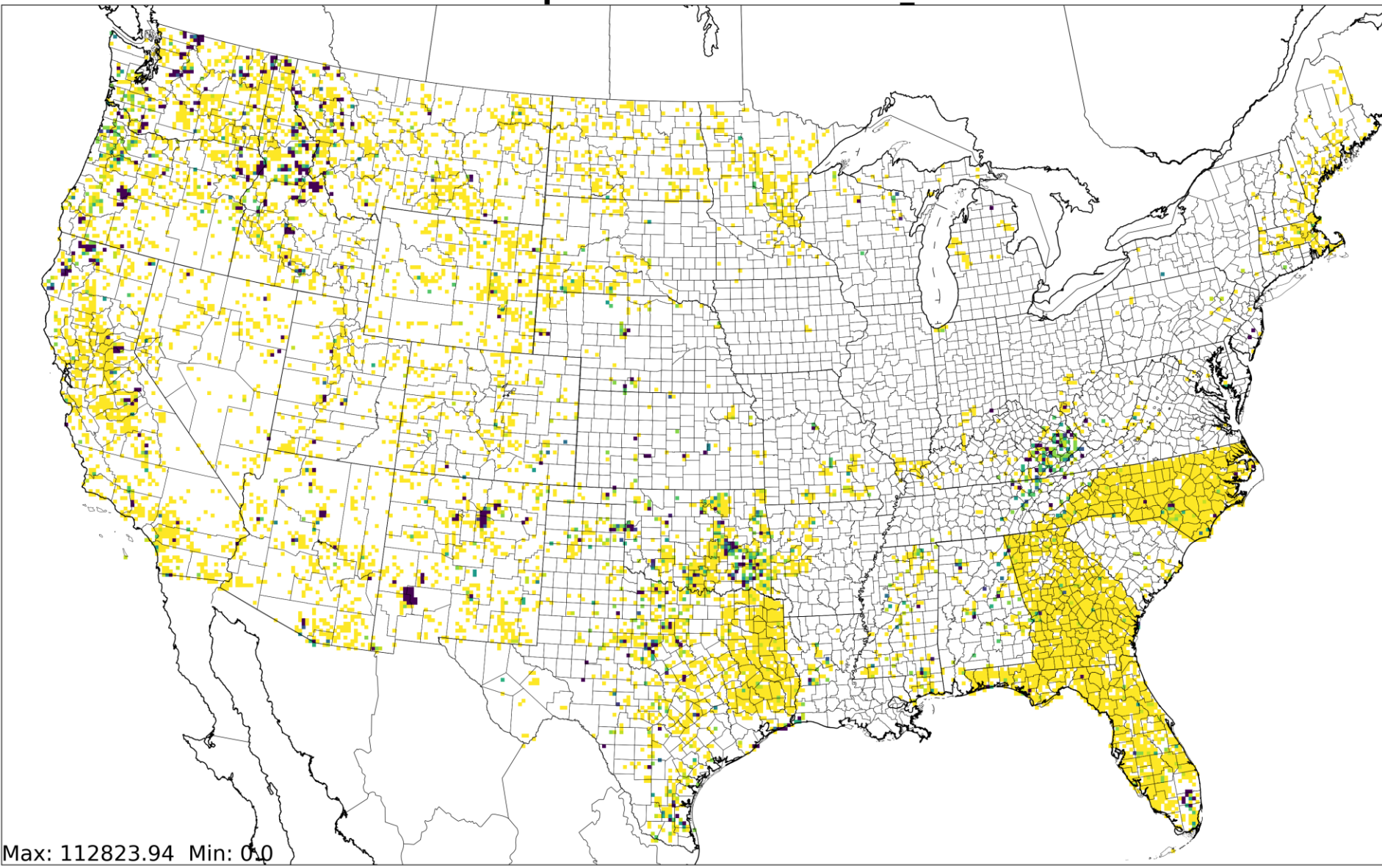
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2022 ptfire WF Annual ACRESBURNED



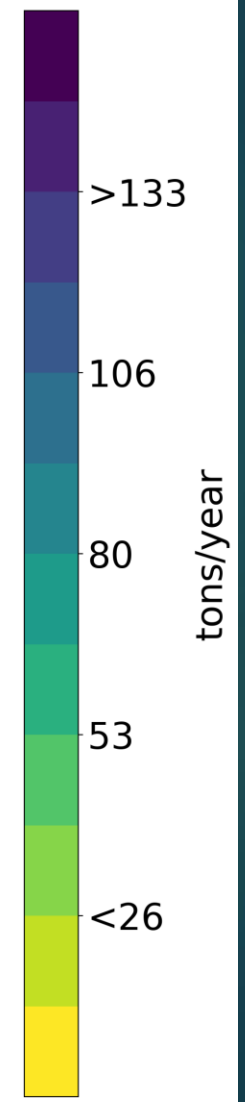
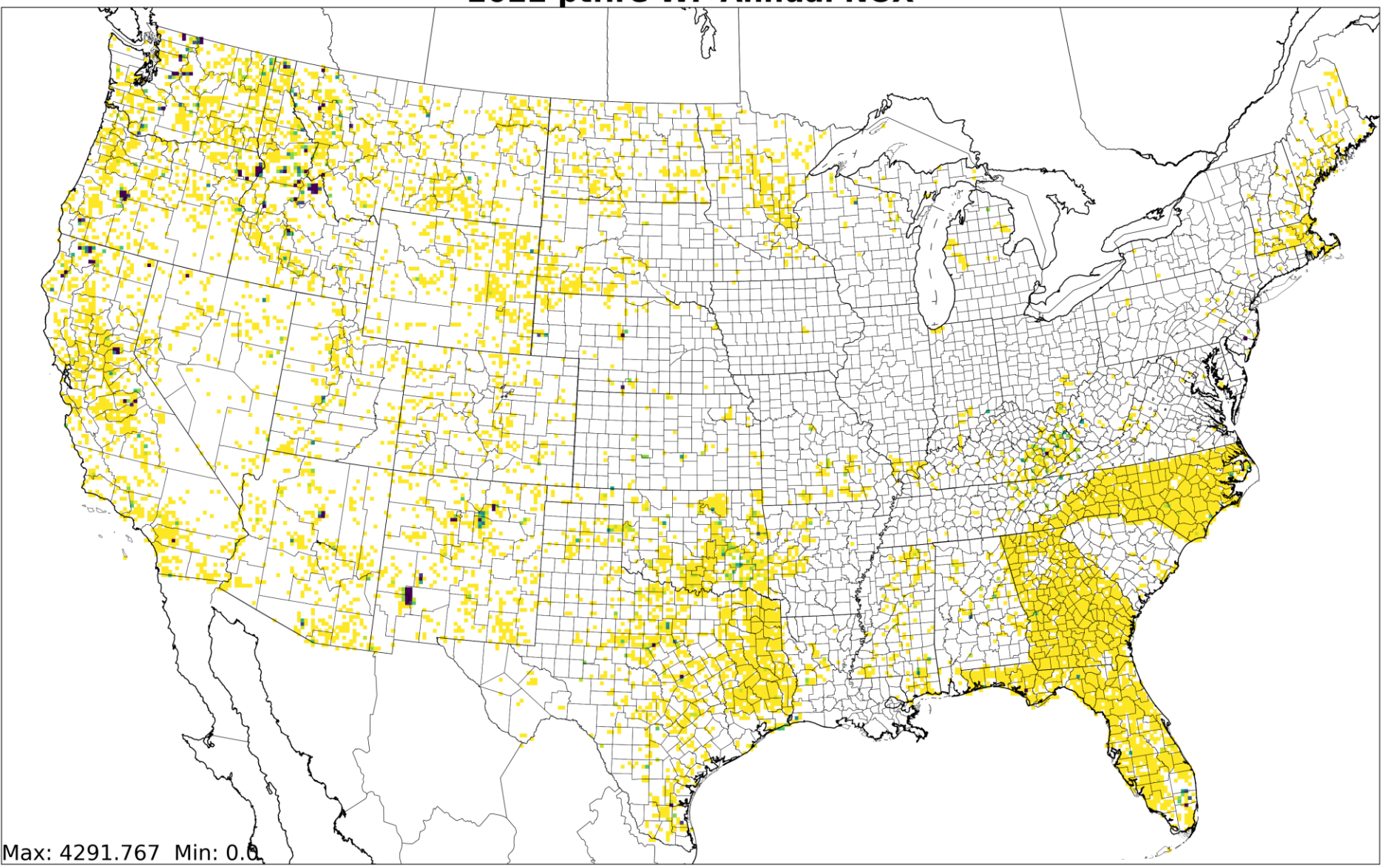
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2022 ptfire WF Annual PM2_5



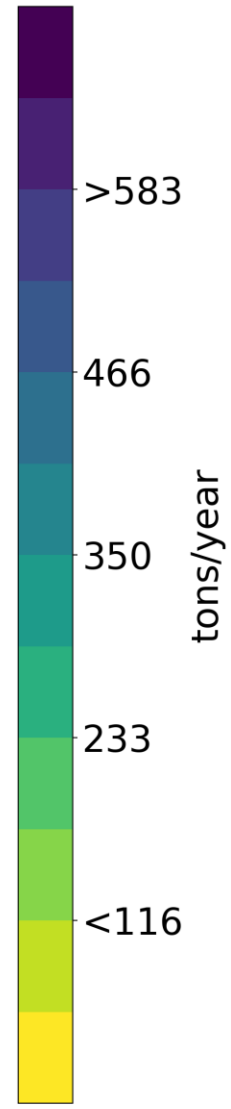
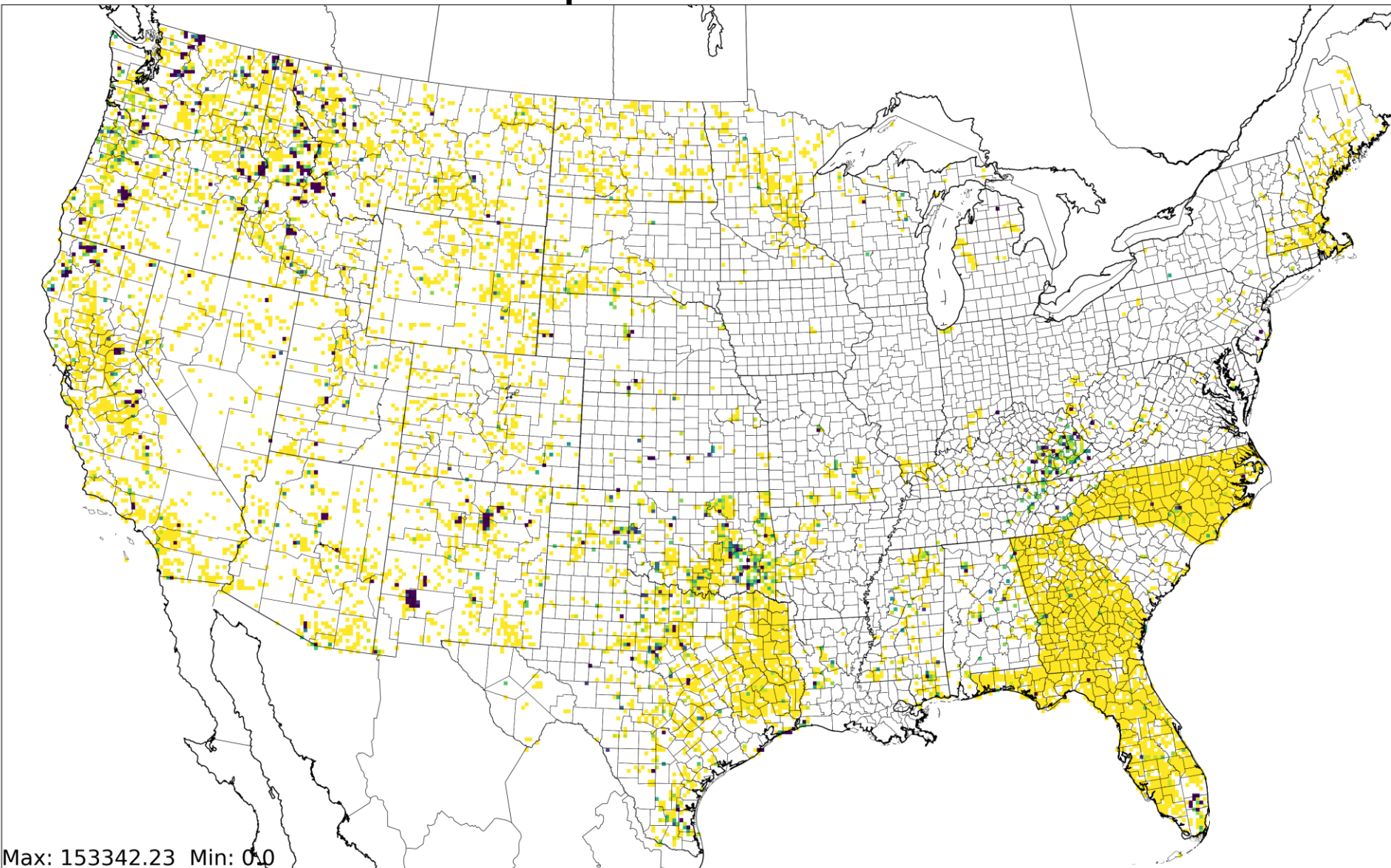
Max: 112823.94 Min: 0.0

2022 ptfire WF Annual NOX



Max: 4291.767 Min: 0.0

2022 ptfire WF Annual VOC



Max: 153342.23 Min: 0.0

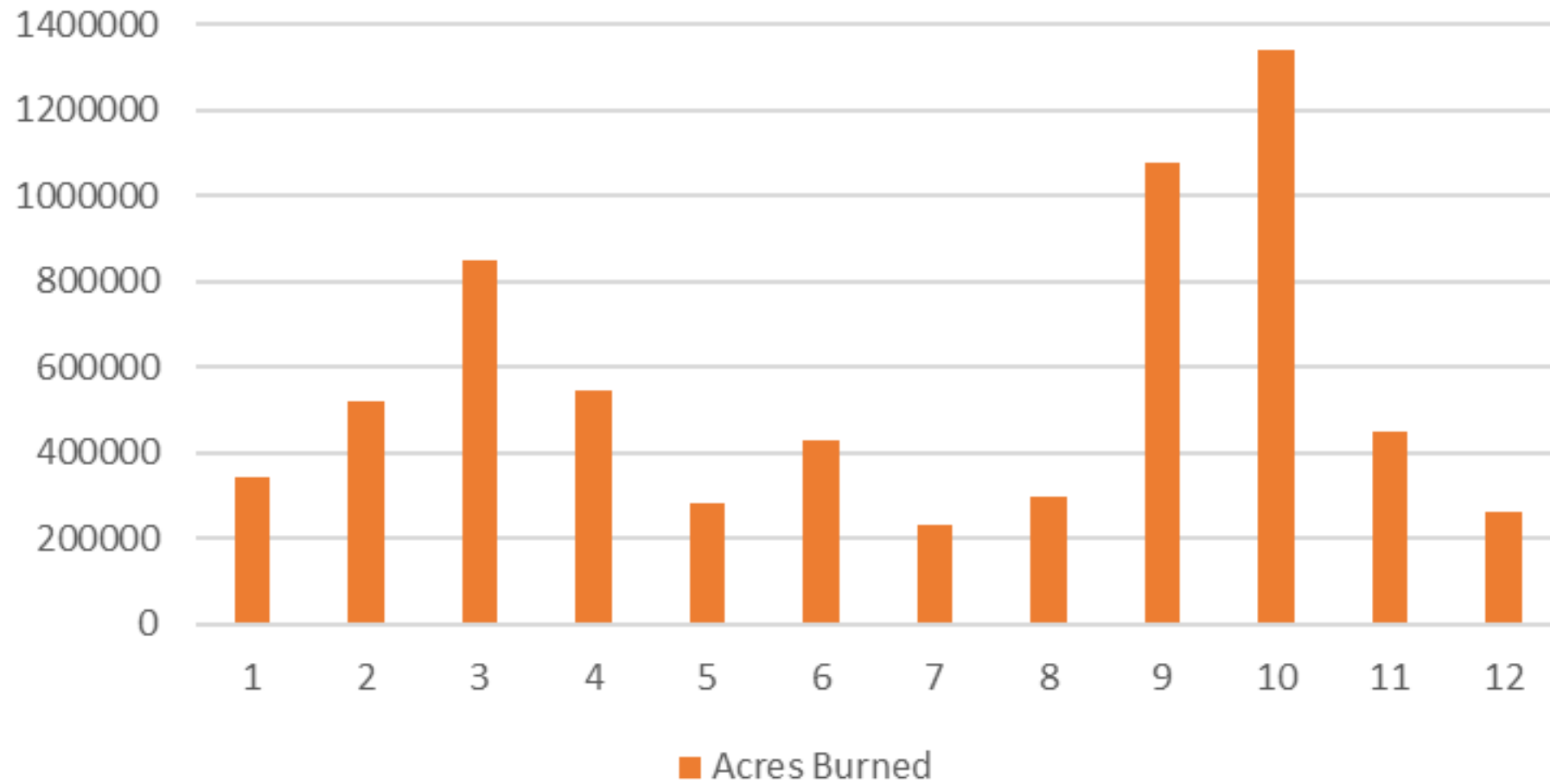
Agricultural or Crop Residue burns

Crop Residue Burns 2022

- ▶ Number of HMS detects and average crop field size by state used to get daily acres burned
 - ▶ 122,000 HMS detects in 2022 draft
- ▶ Sugarcane: use area harvested from USDA or LSU (Louisiana); use HMS detects to estimate acres/detect by state; use emission factors (from SPECIATE for PM2.5/VOC) to estimate emissions Texas: 114 acres/detect (25% green harvested); LA 28 acres/detect (62.5 % green harvested; FL 60 acres/detect)
- ▶ Crops Module added to Bluesky Pipeline that uses daily acres burned information as input and generate consumption estimates and applies emission factors to get resulting daily emissions for each burn
- ▶ 2022 Draft: 6.64M acres burned

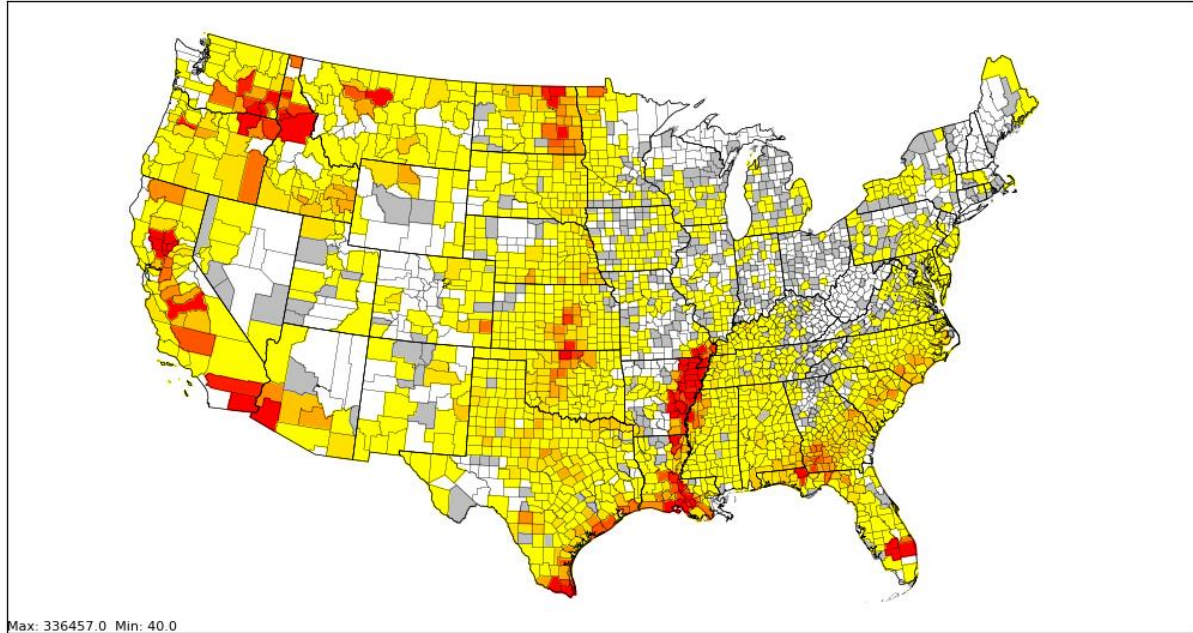
Pollutant	Tons Per Year
CO	846,863
NH3	172,988
NOX	37,179
PM10	125,918
PM2_5	85,522
SO2	15,123
VOC	141,279

Crop Residue Burns: Monthly Acres Burned

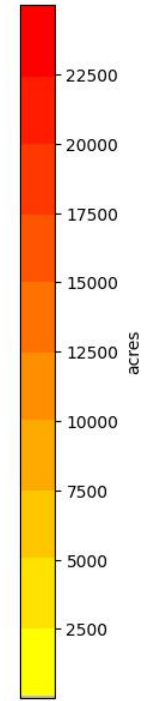


SCC	SCC description	Acres Burned
2801500000	Ag Field Burning - whole field set on fire;Unspecified crop type	1,357,985
2801500141	Ag Field Burning - whole field set on fire;Field Crop is Bean (red)	966,229
2801500150	Ag Field Burning - whole field set on fire;Field Crop is Corn	619,285
2801500160	Ag Field Burning - whole field set on fire;Field Crop is Cotton	415,514
2801500220	Ag Field Burning - whole field set on fire;Field Crop is Rice	616,978
2801500250	Ag Field Burning - whole field set on fire;Field Crop is Sugar Cane	608,756
2801500262	Ag Field Burning - whole field set on fire;Field Crop is Wheat	778,433
2801500264	Ag Field Burning - whole field set on fire;Winter Wheat and Soybeans	109,265
2811020002	Prescribed Rangeland Burning; Pasture	1,168,631
	Total	6,641,077

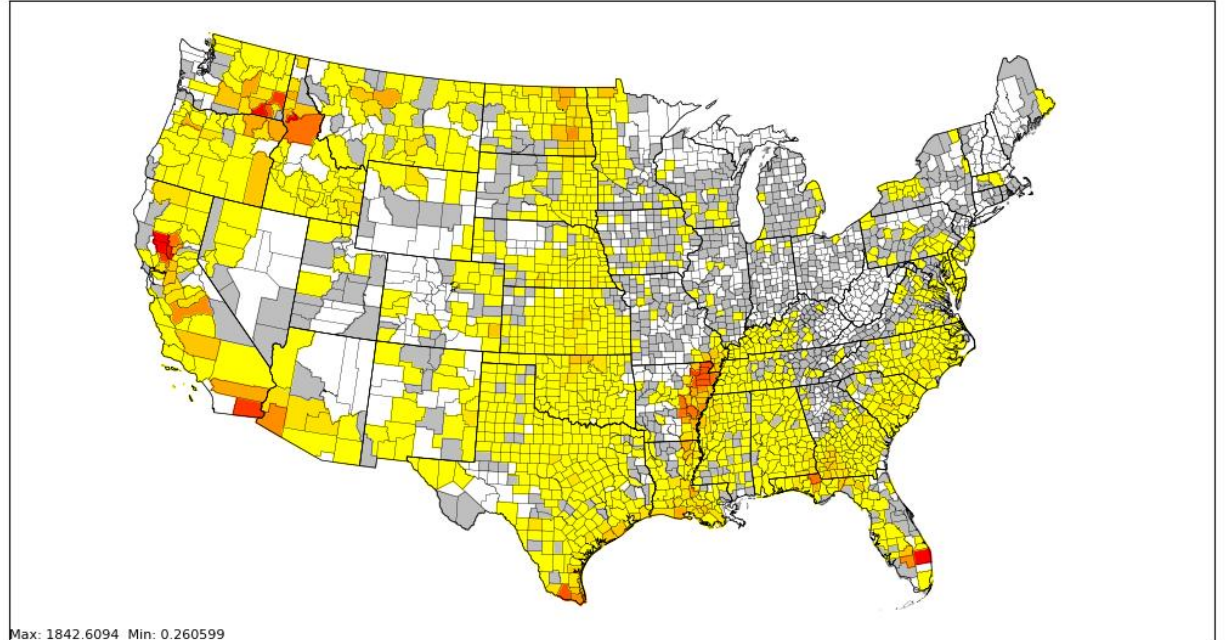
Ag Burn county annual ACRESBURNED for 2022draft



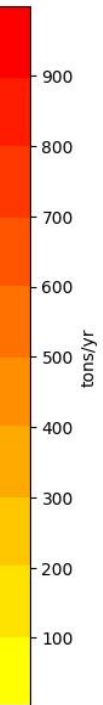
Max: 336457.0 Min: 40.0



Ag Burn county annual PM2.5 emissions for 2022draft



Max: 1842.6094 Min: 0.260599



Pile burns emissions: Status update

Types of pile burn activity available

49

- ▶ Location (latitude-longitude)
- ▶ Tons of fuel consumed
- ▶ Acres (cleared)
- ▶ Number of piles
- ▶ Height-and-width of pile
- ▶ Cubic feet of pile
- ▶ Fuel type
- ▶ Hand or machine-made piles

- ▶ Assumptions to get volume of fuel in pile (if needed)
- ▶ Assumptions to get fuel type (use FCCS when possible)
- ▶ Assumptions to get fuel consumed
 - ▶ Machine-made piles assumed to be dirtier, packing ratio, mass of fuel, combustion efficiency
- ▶ Assumptions to get combustion phase fractions (flaming, smoldering)
- ▶ Emissions factors assumption to support all possible pollutants (SERA, Hardy, others?)
 - ▶ Hand vs. machine made pile differences?

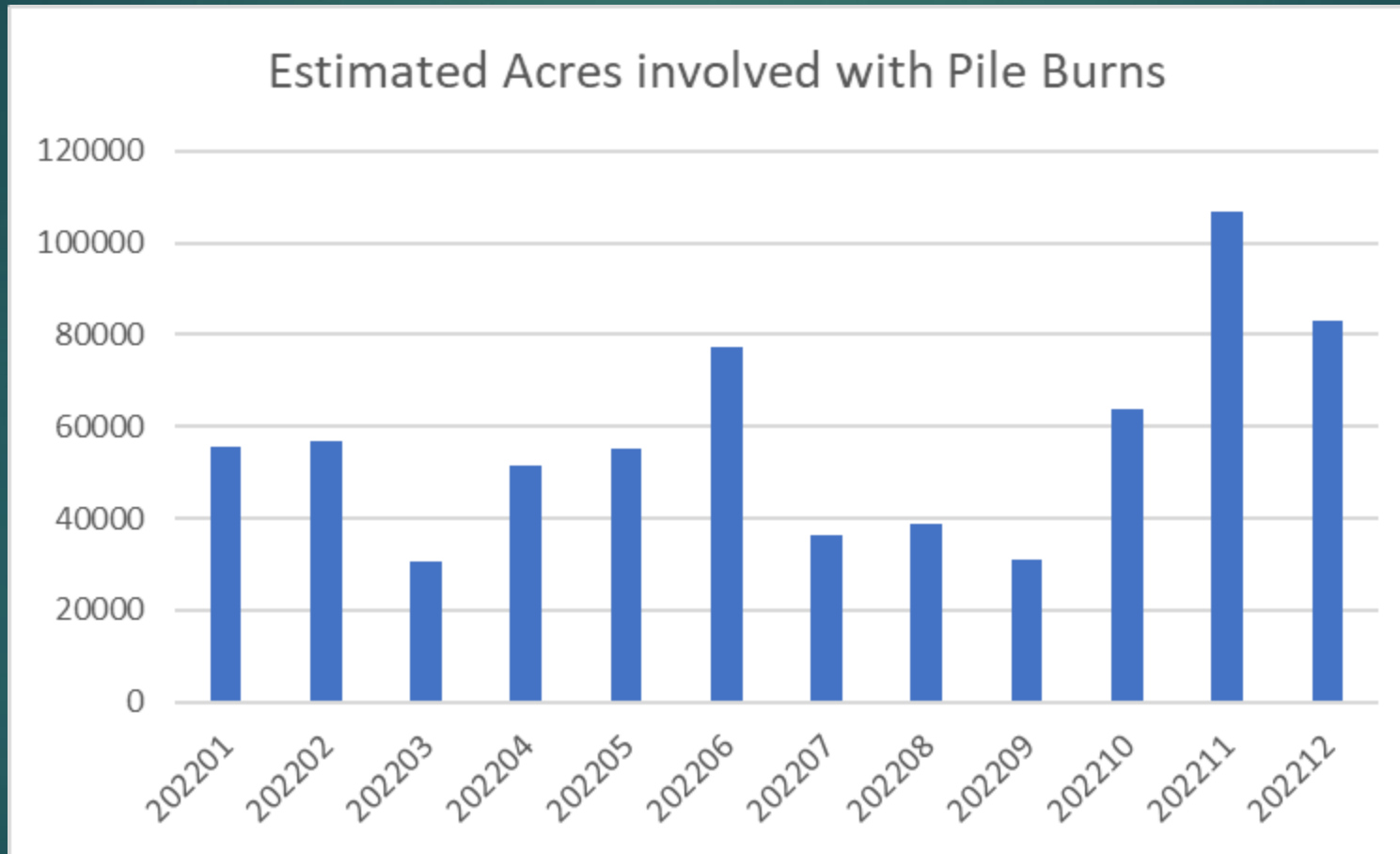
Pile Burn Data Analysis in draft version work

51

- ▶ States: FL , CA and WA
- ▶ Federal Agencies: DOI, USFS
- ▶ 7260 pile burn “events”
- ▶ Rough estimate of 687,000 acres involved in these burns
- ▶ 1705 pile burn events reconciled with HMS satellite detects (23%)
 - ▶ Roughly 280,000 acres (40%)

State	Estimated acres involved in Pile Burns
Alaska	119
Arizona	5,403
California	20,188
Colorado	6,844
Florida	507,184
Idaho	6,733
Indiana	0.4
Michigan	268
Minnesota	499
Montana	8,835
Nebraska	261
Nevada	2,072
New Mexico	3,193
North Dakota	83
Oklahoma	313
Oregon	30,974
South Dakota	13,145
Utah	4,059
Washington	69,842
Wisconsin	21
Wyoming	7,262
TOTAL	687,298

Monthly variability of Pile Burn data in draft



Next steps

SLTs that submitted activity data

SLT	SLT
Arizona	Montana
California	Nevada
Colorado	New Jersey
Connecticut	New Mexico
Florida	Nez Perce Tribe
Georgia	North Carolina
Idaho	North Dakota
Iowa	Oregon
Kansas	Pennsylvania
Louisiana	South Carolina
Maine	Tall Timbers
Maryland	Texas
Minnesota	Utah
Missouri	Washington
	Wyoming

- Deadline to submit was December 8th
- SLTs in draft inventory highlighted in **Red**
- Variety of fire types covered
- EPA will look at each activity dataset submitted and will contact SLT if there are any questions in December-January time frame

Next steps for next inventory version

56

- ▶ Further QA and refinement of major wildfires and continue comparison vs NIFC and other datasets
- ▶ Possible SERA NOX emissions factor updates
- ▶ Provide pile burn estimates for certain states, USFS and DOI for feedback
- ▶ Implement new activity received from SLTs/others in python SF2
- ▶ Filter inventory for fires over federal lands (including military and tribal) using appropriate shapefiles
- ▶ Work with individual states to handle cases that usually come up during NEI (e.g. Arizona agricultural lands near Gila River, false detects situations, fuel assignment questions)
- ▶ Rerun BSP with new activity
- ▶ Agricultural burns
 - ▶ Are some agricultural burns part of wildfires QA?
- ▶ Apply solar farm location QA again and to ALL fire types

Updated timeline to get to 2022v1

- ▶ Initial pile burn estimates (available by Jan 5, 2024)
- ▶ Pile burn review/feedback (by Feb 2, 2024)
- ▶ New version of emissions using all recently submitted activity including pile burns (March 1, 2024)
- ▶ Review period for SLTs/others for inventory (March 1 – April 30, 2024)
- ▶ Next Workgroup Meeting (early March 2024)
- ▶ Use feedback from March-April review to further improve inventory (May – mid June 2024)
- ▶ Workgroup Meeting #3 (June-July 2024)

Any questions about 2022 fires please
contact Vukovich.Jeffrey@epa.gov