Status of 2016v1 fire inventory

YEAR 2016 EMISSIONS MODELING PLATFORM PURPOSES
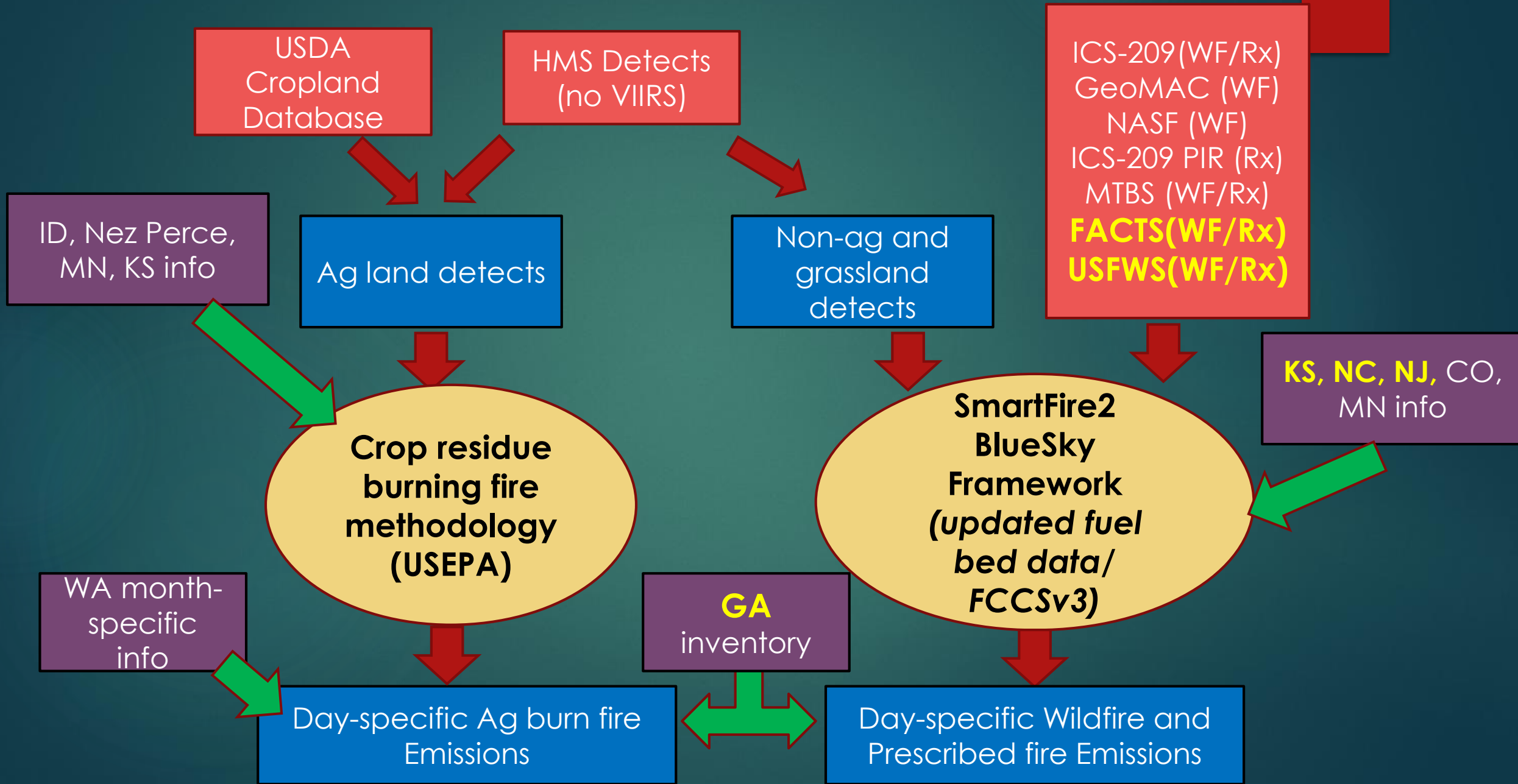
J. VUKOVICH (USEPA)

JUNE 6, 2019

New and improved data used in 2016v1

- Fire information databases
  - USFS FACTS: prescribed *[shapefiles]*
  - US Fish and Wildland Service (USFWS): wildfire and prescribed
  - New Jersey: wildfire and prescribed
  - Georgia: day-specific ag burns
- State data used in different manner in 2016v1
  - NC: Using as input to SmartFire2 instead of input into BlueSky
  - KS: Better spatial allocation of acres burned
- Cleaned up bad or duplicate fire information
- Changed end date for some fires for consistency across all databases
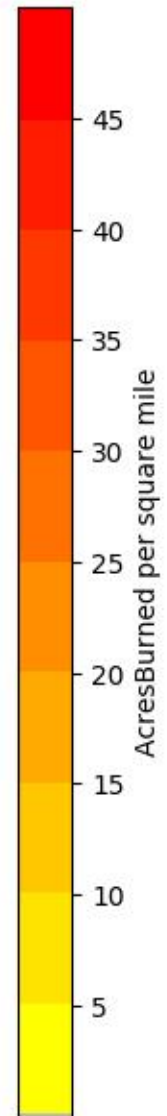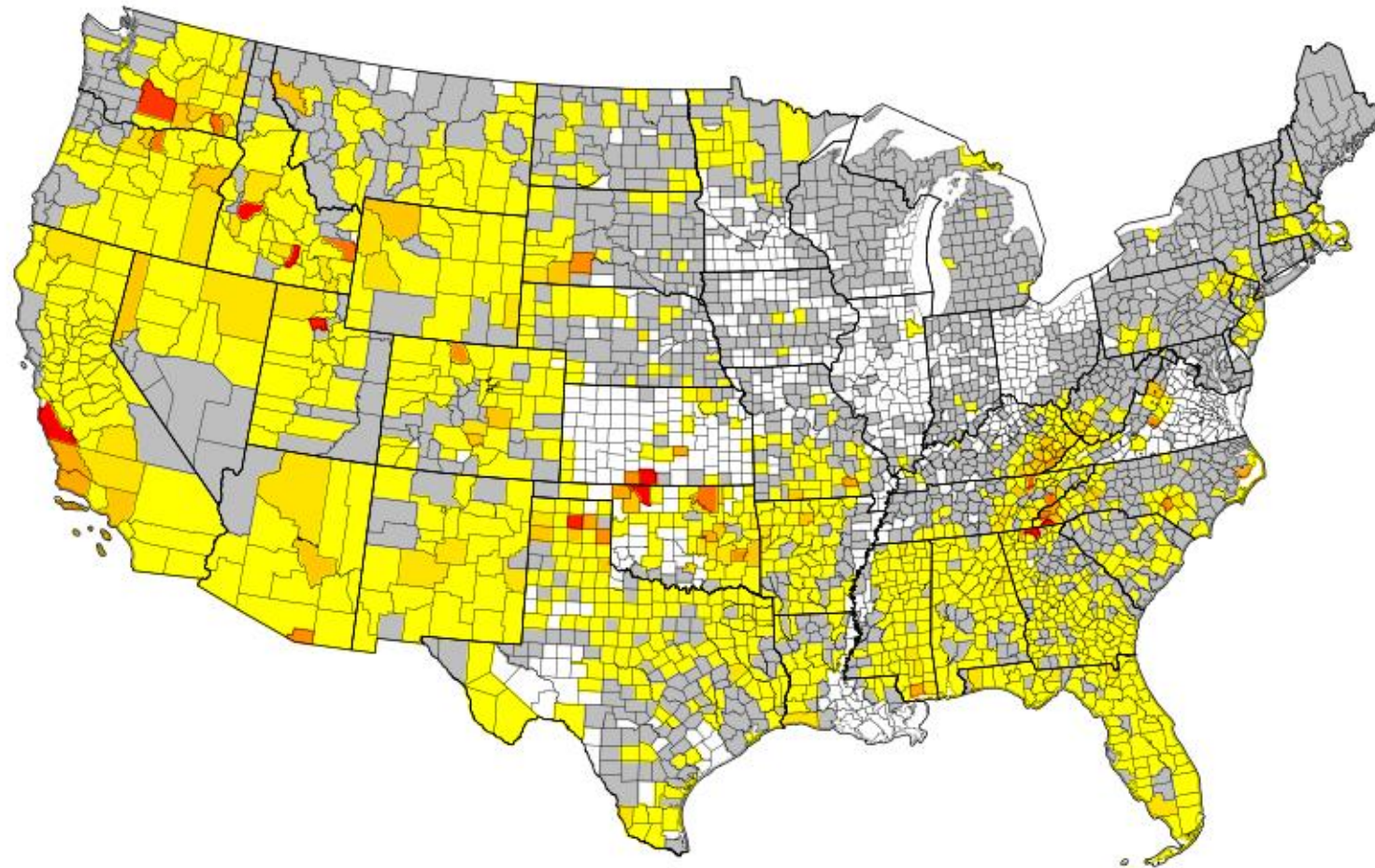- **Unable to use Dept of Interior NFPORS fire information due to poor end date data**

Fire Emissions Processing at High-Level for 2016v1

USDA Cropland Database

HMS Detects (no VIIRS)

ICS-209(WF/Rx)
GeoMAC (WF)
NASF (WF)
ICS-209 PIR (Rx)
MTBS (WF/Rx)
FACTS(WF/Rx)
USFWS(WF/Rx)

ID, Nez Perce, MN, KS info

Ag land detects

Non-ag and grassland detects

Crop residue burning fire methodology (USEPA)

KS, NC, NJ, CO, MN info

SmartFire2 BlueSky Framework *(updated fuel bed data/ FCCSv3)*

WA month-specific info

GA inventory

Day-specific Ag burn fire Emissions

Day-specific Wildfire and Prescribed fire Emissions
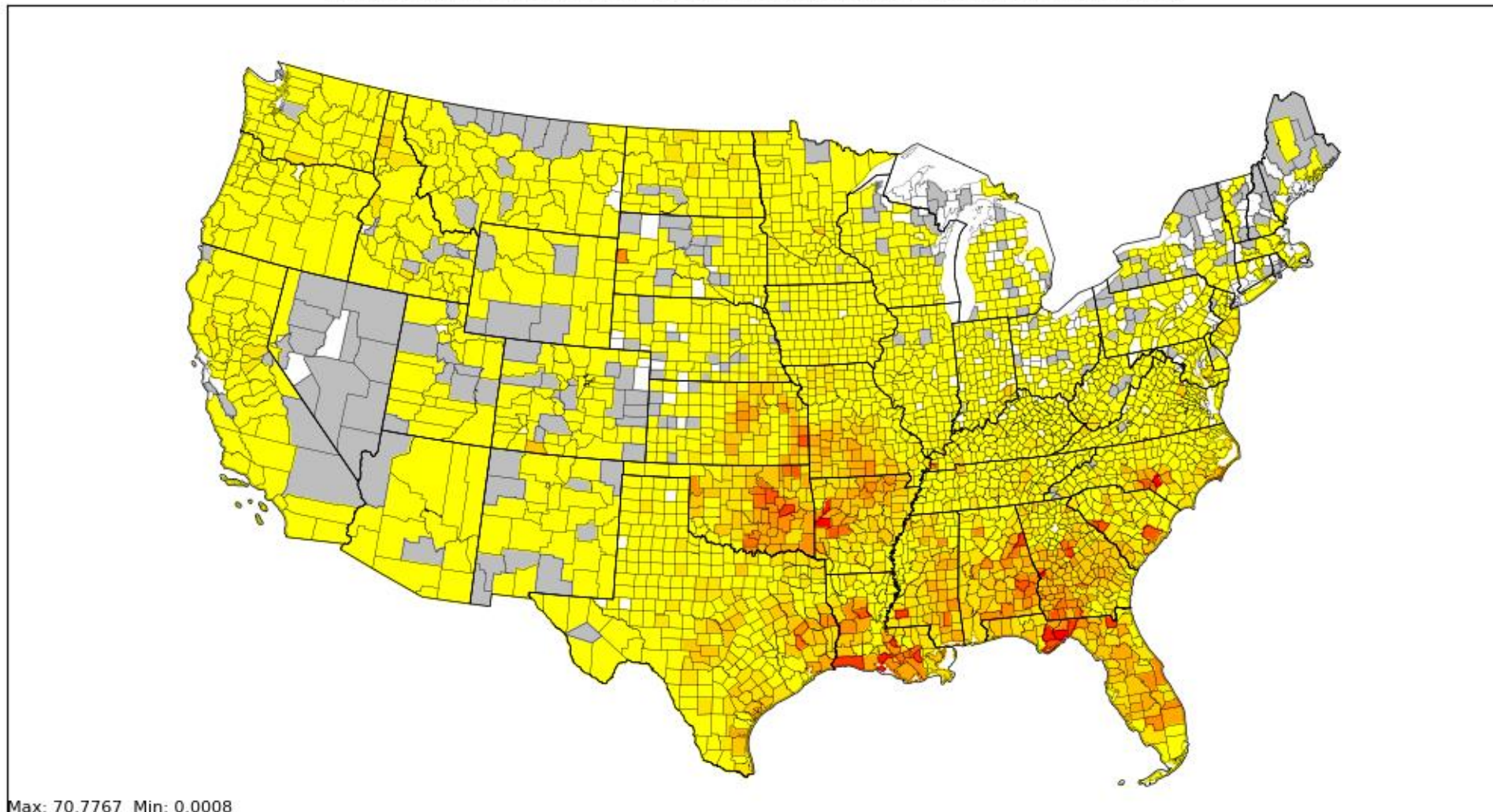
Preliminary results for 2016v1 acres burned

- Overall wildfire and prescribed burn acres burned up from 17M acres (beta) to 17.5M acres
  - AK not updated yet
- Prescribed acres burned up from 11.4M (beta) to 12M
  - Primary reasons: USFS FACTS and USFWS databases added and NC changes
- Wildfire acres burned down from 5.61M (beta) to 5.48M
  - Deleted bad or duplicate fire information for major fires
    - Largest impacts in CA, CO, SD, and OR
  - Minor changes to some end dates of events in some databases for better consistency and better characterization

Acres Burned Density: wildfire 2016 pre-v1 inventory

Max: 259.689 Min: 0.0

AcresBurned per square mile

Acres Burned Density: prescribed_fire 2016 pre-v1 inventory

Max: 70.7767   Min: 0.0008

* Flint Hills submitted inventory not included in map

Work left to do for 2016v1

- CONUS emissions
  - QA output from BlueSky
  - "Urban" fuel bed status in new emissions; has it improved?
  - Implement GA day-specific ag fire info and other minor changes to agricultural fires
  - Generate QA reports for Workgroup
  - Generate SMOKE-ready FF10 inventory files
- Alaska emissions
- Feedback on CONUS emissions due by July 5
  - Anticipating feedback from NC; others?
- Implement any possible changes based on feedback rest of July