Updates included in 2022v2 base year emissions

Last updated 5/21/2025

Questions can be sent to emissionsmodeling@epa.gov

Onroad:

- Use MOVES5 to create emission factors
    - This includes fuel parameter updates and other data and method refinements
- Updated vehicle registration data based on 2023 data pull
    - Updated age distribution
    - Updated VPOP by source type and fuel splits
    - VMT and HOTELING computed to reflect the new source type and fuel splits
    - Updated Off-network idling (ONI) and starts activity data
- Telematics data (based on 2022 and 2023 data)
    - Updated temporal patterns, VMT fraction, and speeds
- Incorporate updates from state and local agencies (e.g., NY, GA) during v1 development (e.g., AVFT and I/M Coverage tables)
- Add total energy consumption to outputs
- Update spatial surrogates using AADT for 2022
- Corrected Nebraska VMT and VPOP in counties with names starting with 'Mc'
- Keep Stage II fuel considerations consistent with the base year for Delaware, DC, Louisiana, New Jersey, and Washington
    - Note: since we're using MOVES5, we don't need to worry about this in 2022v2 platform, except that New Jersey would like gas refueling reduced by 50% in all years. So NJ is the only refueling-related adjustment we're making in 2022v2.

Nonroad:

- Use MOVES5 to compute emissions
- For Utah, use state-provided recreational vehicle inputs
- For Georgia, use EPA defaults instead of data submitted with 2020 NEI for construction and agricultural spatial distribution
- Use updated emissions and mine-specific spatial allocation for offroad truck activity (2270002051) at mines in St Louis County, MN / 27137
- Use updated snowmobile allocations for Wisconsin and Minnesota
- Continue to use NCDAQ's growth factors for industrial nonroad in analytic years

Airports

- Use updated data for ATL airport based on latest AEDT version
- Use updated Terminal Area Forecast (TAF2024) projection factors by aircraft class (GA, military, commercial) for base and analytic year projections (for other than the top 50 commercial airports which were computed specifically in 2022v1)

Point source sectors:

- Download updated 2022 EGU CEMS data for review / comparison with existing (done 2/19/25)   Clarify whether states are updating peaking unit definitions for v2
- Incorporate changes from Air Toxics Screen (ATS) 2022 review/SLT feedback
    - Including updates to stack parameters and locations
- Implement requested New Hampshire facility changes received during analytic year data comment period (Mount Carberry Landfill and Turnkey Recycling)
- Colorado: wants two well pads removed – they were from old data pre-2022 (possibly carried forward from 2020)
- Non-major facility 2698511 in Delaware: Delaware agrees that this should remain in the v2 base year but some refinements would be needed in any v2 analytic year inventories.
- Removed Colorado pt_oilgas facilities which double count np_oilgas
- Removed Louisiana pt_oilgas facility which closed prior to 2022
- Removed California facilities that have one or two emergency generators with insignificant emissions pulled forward from previous years
- Michigan: review differences between EIS data and MI database for 12 facilities
- Update Dickerson facility in Maryland – potential duplicate resolved
- Maryland: remove duplication between stacks and fugitives
- Use CEMS data for taconite sources and other non-EGUs that could be matched
- In the final inventories include more matches to CEMS data for units with one EIS unit but many CEMS units (e.g., Johnsonville TN).

Fugitive dust:

- Oregon unpaved road dust emissions reduced by 45.83%, per SLT comment (implemented 4/24/25)

Solvents:

- Remove cutback asphalt in Maricopa County

Livestock:

- Incorporated updates for Maricopa County

CMV

- Use updated factors to compute HAP emissions

Oil and gas sectors:

- Nonroad emissions factor correction (included in 2022v2 O&G Tool output)
    - Impacts exploration sources only
- Colorado emissions inventory update
    - New Colorado inventory provided 4/15/25
- Kentucky production activity update (included in 2022v2 O&G Tool output)
    - Acquired year 2022 activity for Oil and Gas Tool
    - Used projected 2021 activity in 2022v1
- Remove NH3 emissions from TX compressors, otherwise keep TCEQ-provided compressor emissions from 2022v1
- Removed North Dakota dehydrators at wellpads (2310021400) from O&G Tool output, per state comment
- Use new monthly profiles and speciation / HAP augmentation

Nonpt:

- Update commercial cooking emissions in Maricopa county
- Update biomass consumption sources per LADCO instructions. Overall emissions aren't changing, just the county distributions. This affects 2102008000 and 2103008000 in MI, MN, OH, and WI.
- Remove emissions for SCC 2810005000 (only present in Delaware) because it double counts pile burns in ptfire-rx)

Openburn:

- Zero out emission in New Hampshire for SCC 2610030000.

RWC:

- Incorporate new emissions based on res. woodheating task force and other updates such as what would go into 2023 NEI – note there are SCC changes [includes shift from urban to rural]
- Use 2020NEI state submittals, including areas with SLT-provided components (AK, CA, MN, OR, TX, VT, WA, Maricopa, Washoe), and mapped to new SCCs, with metals recomputed using updated HAP/PM2.5 factors

- Carry forward Idaho's 2022v1 data, and mapped to new SCCs, and recomputed metals recomputed using updated HAP/PM2.5 factors
- Update residential wood combustion spatial surrogates to use weighting by FEMA residential structures and Census ACS residential unit classifications
- Update some RWC speciation profiles

Fire sectors:

- Use additional prescribed fire activity received from AL, MS and TX, including pile burns in AL and TX
- Review large fire around Corpus Christi [from satellite detects]
- Implement changes to prescribed burns based on feedback from USFS
- Continued to clean up of false detects
- Work with NCDENR on improving agricultural burns in NC
- Ditch burns on agricultural lands in Midwest and in Idaho moved to agricultural burn SCC from prescribed burn SCC
  - Reduce acres burned and resulting emissions
- Improved characterization of minor wildfires in various states
- Minor tweaks to burns in DE, MN and AZ
- Maricopa requested for pile burns to be zeroed out (burns are not legal) but no changes were made. EPA response: "the pile burn activity either came from AZDEQ or FACTS so we are leaving them in for v2; the 7 pile burns total = about 0.6 ton of PM2.5"
- Maricopa County requests agricultural field burning emissions be removed. Some fires were removed but not all
- Removed false detects that were over oil and gas operations
- Moved some satellite detected only fires from prescribed burn to agricultural burn based on landuse analysis
- Applied pile burn methodology to some prescribed burns in western states based on satellite analysis

Mexico:

- Incorporate new inventories for five non-border states (Baja Calif Sur, Durango, San Luis Potosi, Sinaloa, Zacatecas).
- Use updated Mexico onroad emissions
- Update to the latest Mexico spatial surrogates, including the corrected commercial / industrial.

Canada:

- No known changes