



OFFICE OF STATE AIR PARTNERSHIPS

WASHINGTON, D.C. 20460

July 9, 2026

MEMORANDUM

SUBJECT: Release of the regulatory AERMOD Modeling System (including AERMOD and AERMET), AERSURFACE, AERMINUTE, and AERPLOT (Version 26135)

FROM: Clint Tillerson, Model Development Team Lead
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TO: EPA Regional Modeling Contacts

The United States Environmental Protection Agency (EPA), Office of State Air Partnerships (OSAP) is releasing a new version (26135) of the AERMOD Modeling System, including the AERMOD dispersion model and the AERMET meteorological preprocessor. This release replaces AERMOD and AERMET version 24142. AERMAP, the terrain preprocessor, was not updated as part of this release, and version 24142 remains as the regulatory version of AERMAP. Released concurrently are non-regulatory components including the AERSURFACE land cover preprocessor, version 26135 replacing version 24142, the AERMINUTE one-minute wind data preprocessor version 26135 replacing version 15272, and the AERPLOT visualization program version 26135 replacing version 24142.

This memorandum provides information on these updated programs which can be downloaded from the EPA's Support Center for Regulatory Atmospheric Modeling (SCRAM) website, links provided below. If there are any questions about this new release of the AERMOD Modeling System and related programs or if issues are encountered, please send an email to Tillerson.Clint@epa.gov.

Background

In 2005, the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) was promulgated as the EPA's preferred near-field dispersion model for regulatory applications, replacing the Industrial Source Complex (ISC) model. AERMET is the regulatory meteorological preprocessor for AERMOD and can process National Weather Service (NWS) surface data, NWS upper air data, site-specific data, (i.e., data collected at a nearby representative meteorological station), and pre-processed prognostic meteorological data generated with a model such as the Weather Research and Forecasting (WRF) Model. AERMET processes the meteorological

data to calculate boundary layer parameters that are input into the AERMOD dispersion model. AERMAP, which is not included in this update, is the regulatory terrain preprocessor for AERMOD and can process elevation data provided by the U.S. Geological Survey (USGS) from the 3D Elevation Program (3DEP) as GeoTIFF files; however, data compression must be removed for AERMAP to read the file. Instructions for removing the data compression and an alternate source for the data are available at:

https://gaftp.epa.gov/Air/aqmg/SCRAM/models/related/aermap/Access_and_Conversion_of_Elevation_Data_for_AERMAP.pdf.

With respect to the non-regulatory programs released concurrently with the AERMOD and AERMET programs, AERSURFACE processes land cover data from the National Land Cover Database (NLCD) provided by the USGS and distributed by the Multi-Resolution Land Characteristics (MRLC) Consortium as GeoTIFF files to calculate surface characteristics (albedo, Bowen ratio, and surface roughness) which are required inputs to AERMET. More information about obtaining land cover data from the MRLC is available at:

https://gaftp.epa.gov/Air/aqmg/SCRAM/models/related/aersurface/NLCD_Sources_for_AERSURFACE.pdf.

AERMINUTE processes archived NWS one-minute averaged wind data and generates hourly averaged wind data for input to AERMET. AERPLOT processes AERMOD output and generates a Keyhole Markup Language (KML) file of receptor concentrations, concentration contours, and emission source locations that can be viewed directly in Google Earth or imported into Geographic Information System (GIS) programs such as ArcGIS.

For more information regarding the regulatory version of the AERMOD Modeling System and its application, please consult Appendix W to 40 CFR Part 51, the *Guideline on Air Quality Models* (*Guideline*) and the EPA's Support Center for Regulatory Atmospheric Modeling (SCRAM) at:

<https://www.epa.gov/scram/>

AERMOD

<https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod>

AERMOD 26135 replaces the regulatory version 24142 with the following updates:

- Bug Fixes and Enhancements
 - Correction in MAXIFILE output when using model restart option.
 - Correction to NO_x-to-NO₂ Tier3 OLM option that produced fatal error when using sector-varying background concentrations.
 - Correction to accounting in NO_x-to-NO₂ Tier3 GRSM option to properly sum source group contributions in the MAXDCONT output.
 - Correction to POSTFILE output when using multiyear (MULTYR) processing option.
 - Added option to separate hourly emission rates into multiple source-specific hourly emission rate files rather than requiring a single hourly emission rate file.

- Updates to non-regulatory ALPHA options in development:
 - Added options to define continuous solid barriers, treatment barrier edge effects, and vegetative barrier option for mobile sources when using RLINEXT source type.
 - Update to aircraft plume rise.

AERMET

<https://www.epa.gov/scram/meteorological-processors-and-accessory-programs#aermet>

AERMET 26135 replaces the regulatory version 24142 with the following updates:

- Bug Fixes
 - Correction to set the variable humidity as a real number instead of an integer.
 - Correction for format overflow of the upper air station elevation (when $\geq 1,000$ m) when writing to the upper air EXTRACT or QAOUT file.
 - Modified subroutine WINDS in mod_pbl.f90 to not use a NWS wind observation if the wind speed is not missing and the wind direction is missing but is not a variable wind observation.
 - Modified subroutine READ_CD144 to correct the missing value indicator of ceiling height from -99999 to -9999.
- Enhancements
 - Added capability to process surface meteorology from the National Centers for Environmental Information in the Global Historical Climatology Network hourly (GHCNh) format which has replaced the Integrated Surface Hourly Data (ISHD) format.
 - Added options to perform data substitution of upper air data from one station to another when soundings from the primary station are missing.

AERMINUTE

<https://www.epa.gov/scram/meteorological-processors-and-accessory-programs#aerminute>

AERMINUTE 26135 replaces version 15272 with the following update:

- Like AERMET, capability was added to process surface meteorology in the GHCNh format for QA of the 1-minute and 5-minute winds. Hourly averaged winds from AERMINUTE are unchanged from version 15272.

AERSURFACE

<https://www.epa.gov/scram/air-quality-dispersion-modeling-related-model-support-programs#aersurface>

AERSURFACE 26135 replaces version 24142 with the following updates:

- Bug Fixes
 - Correction to read user-supplied Albers projection parameters when missing from the

- GeoTIFF file.
- Increased input path/filename character limit from 200 to 300.
- Enhancement
 - Add user option for more flexibility in how wind sectors are defined as HIGHZ0 or LOWZ0 in determining surface roughness.

AERPLOT

<https://www.epa.gov/scram/air-quality-dispersion-modeling-related-model-support-programs#aerplot>

AERPLOT 26135 replaces version 24142 with the following update:

- Added capability to display 3D receptor grid based on use of FLAGPOLE heights.