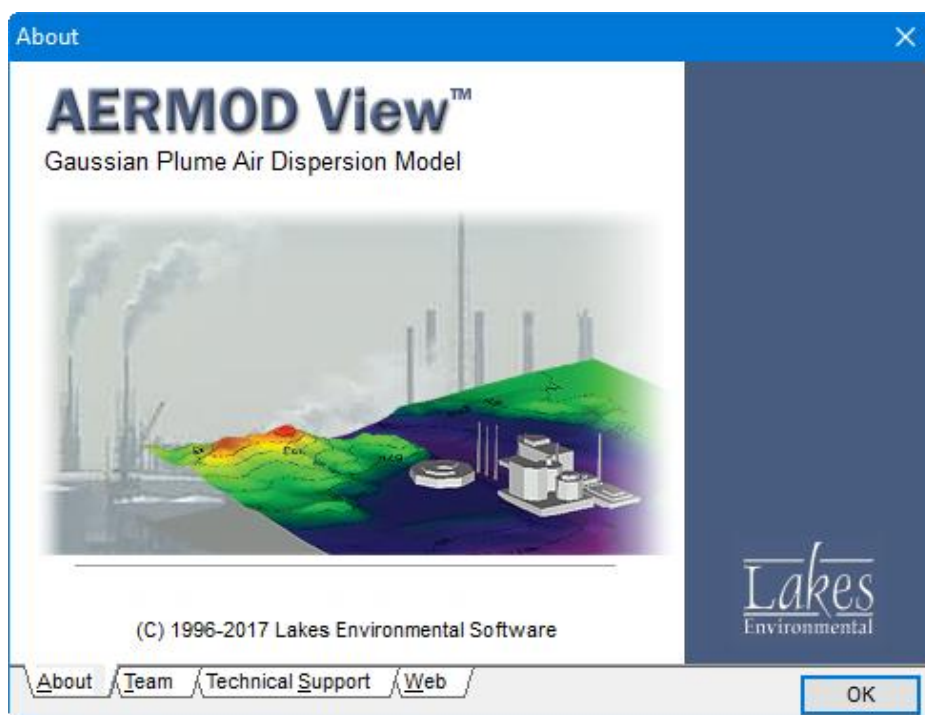


AERMOD View™

Gaussian Plume Air Dispersion Model - AERMOD

Release Notes

Versions 9.3, 9.4, and 9.5



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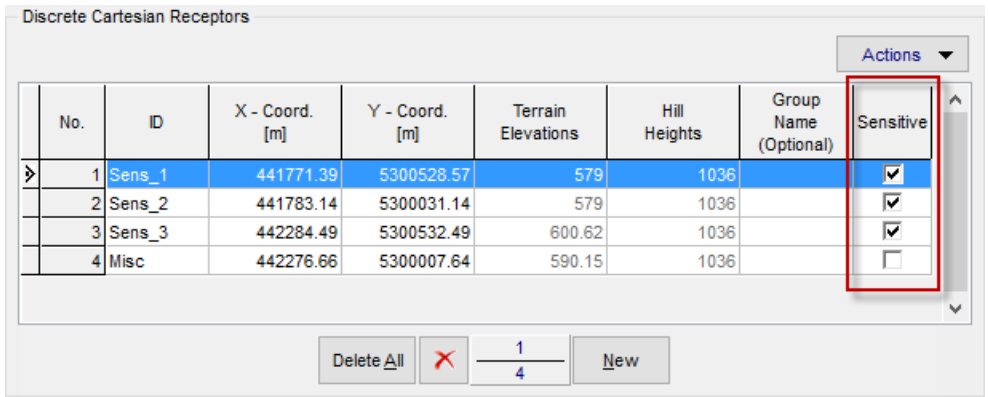
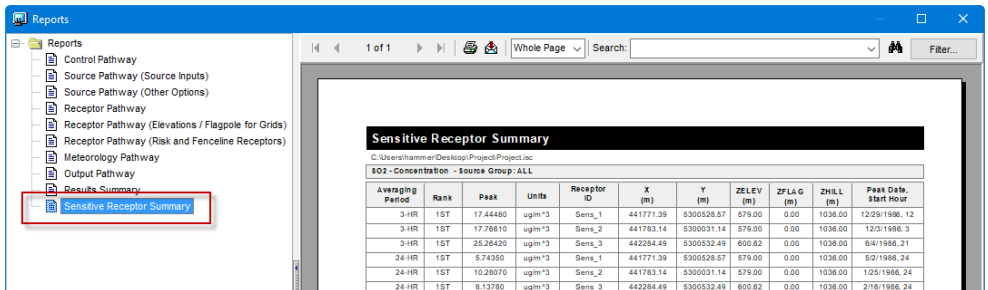


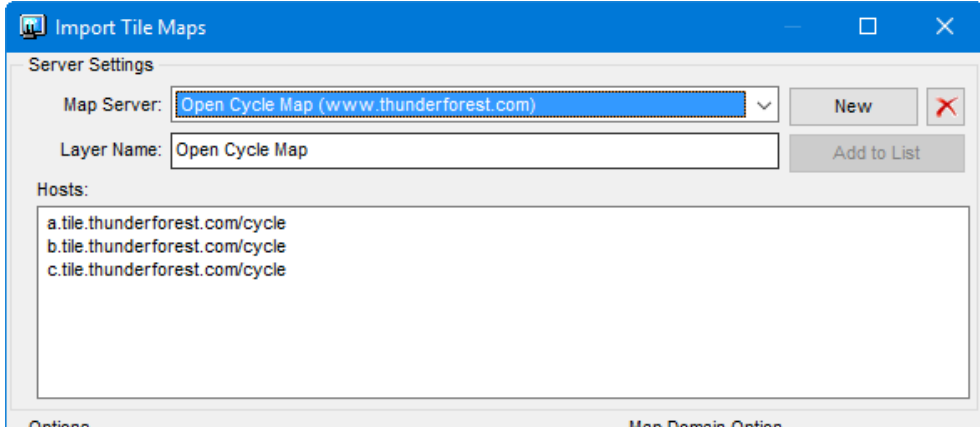
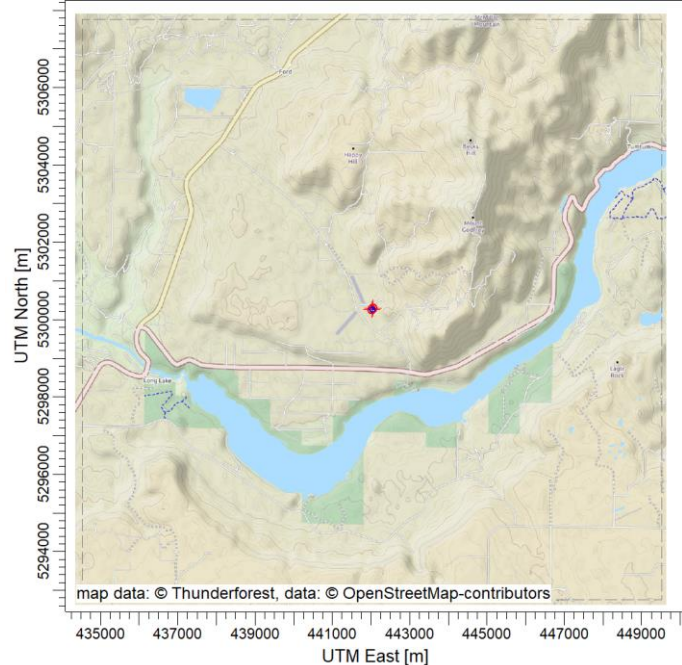
AERMOD View™ Version 9.5

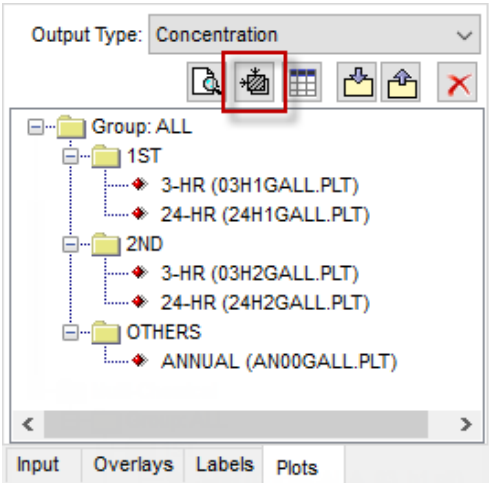
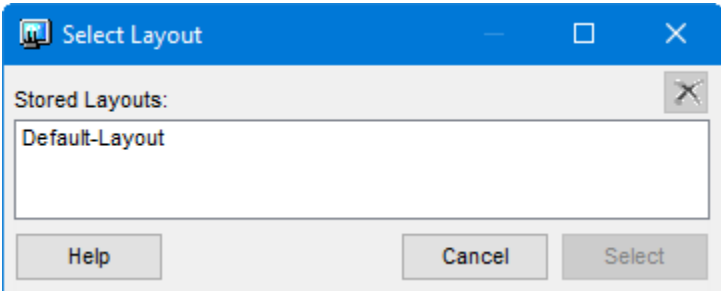
Release Notes

September 18, 2017

New Features

Topic	Feature Description
Receptor Pathway	<p>Sensitive Receptor Summary Report</p> <p>Modelers can now flag discrete receptors as Sensitive, and AERMOD View will produce a Sensitive Receptor Summary Report which details concentrations at the flagged receptors. This is useful when needing to quickly find concentrations at specific receptors.</p>  <p>The screenshot shows a window titled 'Discrete Cartesian Receptors' with a table of receptors. The table has columns: No., ID, X - Coord. [m], Y - Coord. [m], Terrain Elevations, Hill Heights, Group Name (Optional), and Sensitive. The 'Sensitive' column has checkboxes for Sens_1, Sens_2, and Sens_3, and a red box highlights this column.</p>  <p>The screenshot shows a window titled 'Reports' with a tree view on the left. The 'Sensitive Receptor Summary' report is selected. The right pane displays the report content, which includes a table of receptor data.</p>

Topic	Feature Description
Tile Maps	<p>Updates to Open Cycle Maps</p> <p>The Open Cycle Maps server was updated to reflect the most up-to-date server settings and map hosts.</p>  

Topic	Feature Description
Plots	<p>Zoom to Plot File</p> <p>The Plots Tree View now includes a Zoom to Plot File button to quickly zoom to the extents of a selected plot file. This was done to increase efficiency when moving around a modeling domain.</p> 
Graphical Options	<p>New Layouts Functionality</p> <p>The Layout feature has been updated to include all Contours settings in a single Layout. Importing from or exporting to a Layout now includes all sub-headings under the Contours folder.</p> <p>All Layouts settings can be applied to multiple contour plots at one time. To apply settings to multiple plots, use Ctrl+Click on the Plots Tree View.</p> 

Topic	Feature Description																														
Reports	<div><div>Expanded Decimal Values</div><div>The numeric field format was updated for Source Pathway (Source Inputs) reports to include a minimum of two decimal places with each parameter.</div><div><div>Source Pathway - Source Inputs</div><div>AERMOD</div><div>Point Sources</div><table><thead><tr><th>Source Type</th><th>Source ID</th><th>X Coordinate [m]</th><th>Y Coordinate [m]</th><th>Base Elevation (Optional)</th><th>Release Height [m]</th><th>Emission Rate [g/s]</th><th>Gas Exit Temp. [K]</th><th>Gas Exit Velocity [m/s]</th><th>Stack Inside Diameter [m]</th></tr></thead><tbody><tr><td>POINT</td><td>STCK1</td><td>442023.00</td><td>5300264.00</td><td>583.37</td><td>60.00</td><td>1.00000</td><td>415.00</td><td>11.00</td><td>5.00</td></tr><tr><td>POINT</td><td>STCK2</td><td>442058.00</td><td>5300289.00</td><td>585.05</td><td>50.00</td><td>1.00000</td><td>350.00</td><td>10.00</td><td>1.00</td></tr></tbody></table></div></div>	Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]	POINT	STCK1	442023.00	5300264.00	583.37	60.00	1.00000	415.00	11.00	5.00	POINT	STCK2	442058.00	5300289.00	585.05	50.00	1.00000	350.00	10.00	1.00
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]																						
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POINT	STCK2	442058.00	5300289.00	585.05	50.00	1.00000	350.00	10.00	1.00																						
Multi-Chemical Run	<div><div>Support for Non-Consecutive Years</div><div>The Multi-Chemical Run Utility now includes support for multi-year meteorological data files which contain non-consecutive years. The AERMOD model supports this so long as the gaps in meteorological data only span entire years.</div></div>																														
Project Backup	<div><div>Multi-Chemical Run Utility Files Included</div><div>AERMOD View’s integrated project backup utility now includes all files produced via the Multi-Chemical Run Utility.</div><div><div><div>Backup Options</div><div>Select Files for Backup</div><div><div><div><div>Tutorial.PIN (Date: 2/13/2017 3:57:26 PM Size: 21 KB)</div><div>Tutorial.POU (Date: 2/13/2017 3:57:46 PM Size: 254 KB)</div><div>Tutorial.pro (Date: 2/13/2017 4:47:42 PM Size: 6,896)</div><div>Tutorial.rdf (Date: 9/11/2017 1:49:47 PM Size: 306)</div><div>TUTORIAL.ROU (Date: 2/13/2017 3:35:06 PM Size: 29 KB)</div><div>Tutorial.rpb (Date: 6/27/2017 4:57:31 PM Size: 199)</div><div>Tutorial.SFC (Date: 2/7/2017 2:39:52 PM Size: 1,522 KB)</div><div>TUTORIAL.SOU (Date: 2/13/2017 3:35:06 PM Size: 579)</div><div>Tutorial.sum (Date: 2/13/2017 4:48:48 PM Size: 18 KB)</div><div>Tutorial.sup (Date: 2/13/2017 4:47:42 PM Size: 36 KB)</div></div><div><div><div>Base Maps</div><div>Model Outputs</div><div>Met Data File(s)</div><div>Terrain Maps</div><div>AERMAP Output Files</div><div>Kml Files</div><div><div>Multi-Chemical Files</div><div><div>AD</div><div>Plot</div><div>Post</div><div>mcTemplate.ADI (Date: 2/13/2017 3:58:36 PM Size: 626)</div></div></div></div></div><div><div>Total Size: 220.8 MB</div><div>Max: 2 GB</div><div>Add Files...</div><div>Add Folder...</div><div>Help</div><div>Cancel</div><div>OK</div></div></div></div></div></div></div>																														

Note: Because Multi-Chem relies on use of 1-hour average Post-Processing files (POSTFILE), Backing up the **Post** folder will lead to very large archive files. The POSTFILES must be included to produce new contour plots in the future without executing AERMOD again.

Topic	Feature Description
Import Buildings	Updates to DXF Object Import The Import Buildings from DXF function was updated to better identify objects in the DXF file for better importing. Note: Not all DXF objects are recognized as buildings. AERMOD View imports line, polyline, and polygon objects. Line objects must have starting and ending points within 0.1 meter for the structure to be recognized.
Met View	Expanded SFC File Header Support Met View now supports the expanded Version information produced by AERMET 16216 including 1-minute threshold, adjusted u-star, and data substitution routines.

Fixed Issues

Topic	Issue Description
Source Pathway	Hourly Emission File Source Order When preparing an hourly emission file via the Hourly Emission File Maker utility, AERMOD View now orders the sources according to the listing in Source Inputs to avoid fatal errors during the model run.
Source Pathway	Input File Build with Large Ozone Concentration Arrays When supplying Background Ozone data, the largest tables (e.g., By Month / Hour / Seven Days) would cause a failure when preparing the model input file. This has been resolved.
Receptor Pathway	Import Intermediate Plant Boundary Receptors with Flagpole When importing plant boundary receptors, flagpole heights will now be included with intermediate receptors.
Receptor Pathway	Export Nested Grid Receptors to CSV The Export to CSV option in the Actions menu of Nested Grid receptors was corrected to allow export of all generated receptors.
Output Pathway	Plot File Generation for Empty Percentiles AERMOD View produced an error message when projects contained no concentrations at some receptors while calculating percentiles.
Base Maps	DXF Offset When a DXF file was imported as a base map, any offset values applied were lost when the project was closed and subsequently re-opened. This has been resolved.
Base Maps	File Name Checks The check run on map file name were updated for files containing non-ANSI characters. These files are now converted to their standard DOS name during the import process.

Topic	Issue Description
MAKEMET Utility	Fix for Assigning New File Names When assigning new file names to the PFL or Log files, an incorrect file extension was applied which prevented successful utility execution. This has been resolved.

Known Issues

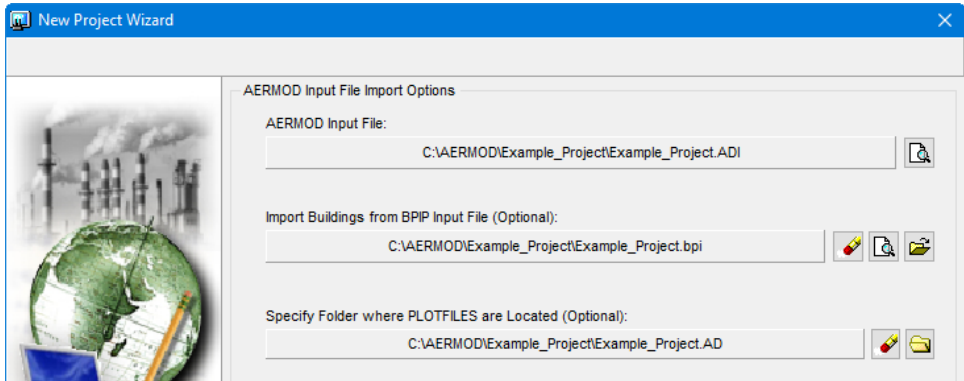
Topic	Issue Description
AERMOD 16216r	Receptor Order Bug There is a bug in the US EPA's code related to receptor exclusion when calculating PRIME downwash effects. There exists the potential for model results to change based upon the order of receptors in the input file.
New Project Wizard	No Spaces in Project Name with ISC The ISCST3 and ISC-PRIME models are included in AERMOD for backwards compatibility purposes. Due to limitations in their code, these models will issue a fatal error if the project name contains spaces or special characters.

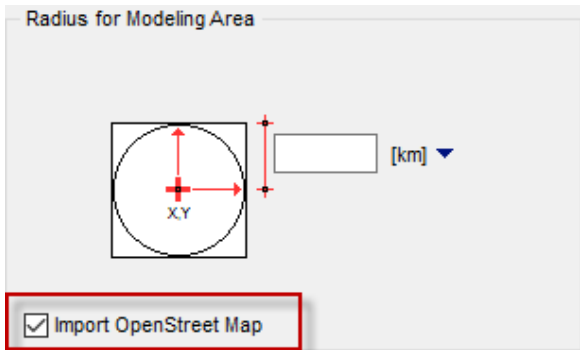
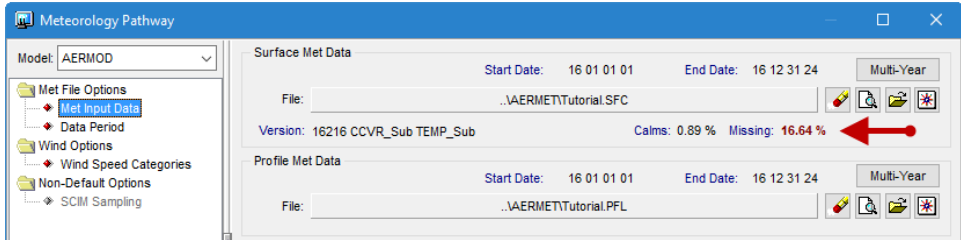
AERMOD View™ Version 9.4

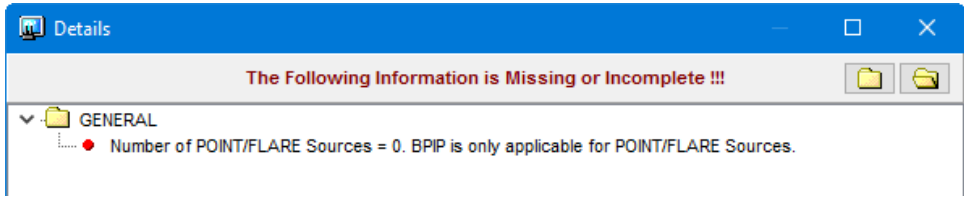
Release Notes

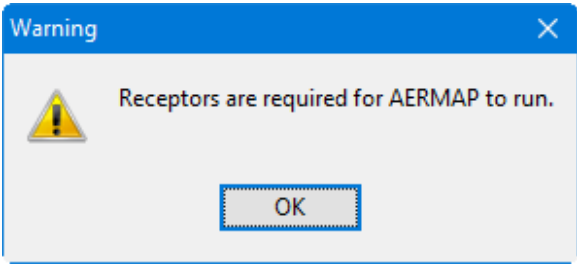
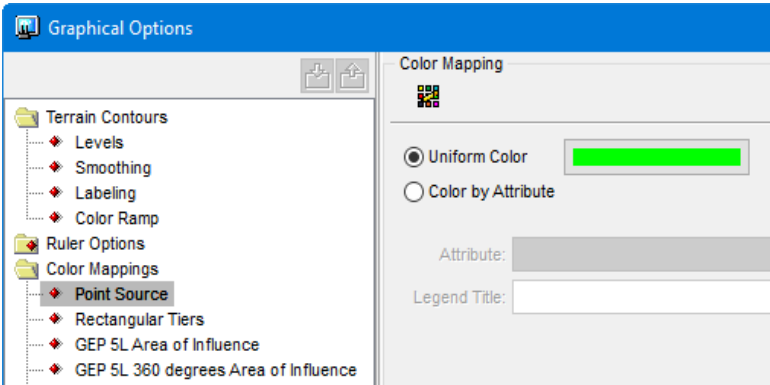
May 11, 2017

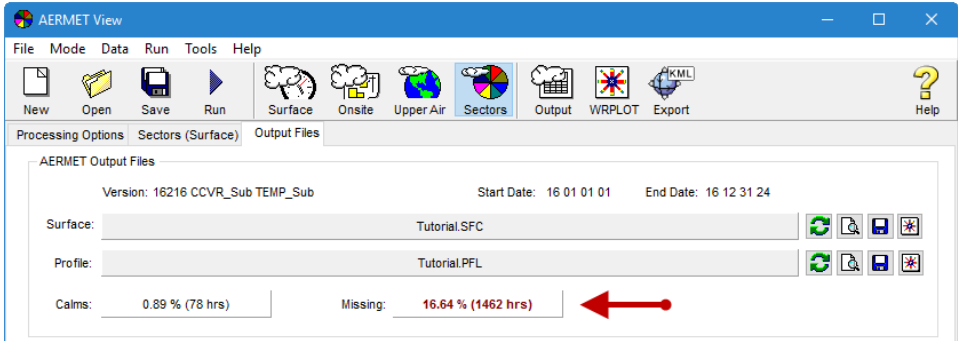
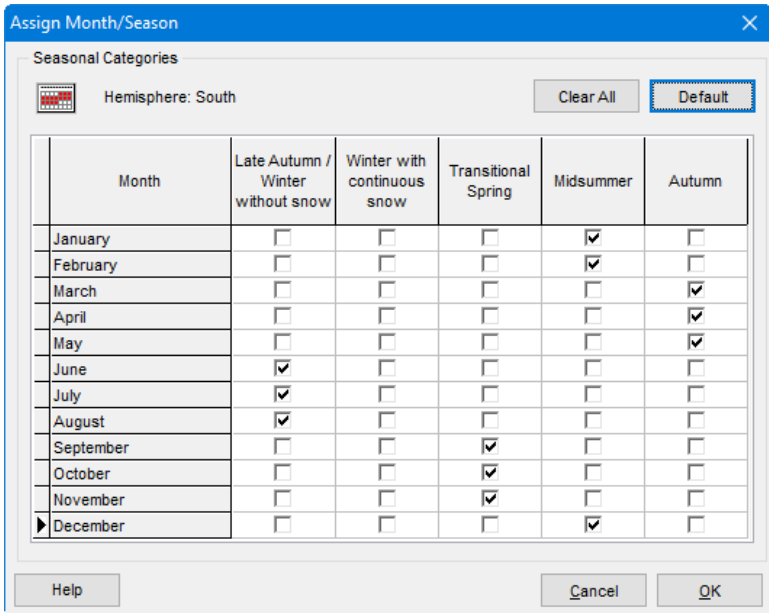
New Features

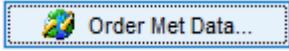
Topic	Feature Description
Models	<p>Updated AERMET Model 16216</p> <p>The previous AERMET executable dated 16216 contained a bug which made it incompatible for 32-bit operating systems. The US EPA subsequently released an updated version of the model, and that update is now available in AERMET View.</p> <p>NOTE: This change does not impact any data files produce using the previous AERMET 16216 model. It only restores 32-bit compatibility to the executable.</p>
New Project Wizard	<p>New Import from AERMOD Input File Options</p> <p>Starting new AERMOD View projects from existing AERMOD input files now allows users to include associated BPIP input files and contour plot files. This makes it easier to open AERMOD projects that were not originally created with AERMOD View.</p> <p>NOTE: Contour plot files are imported from a folder location, so all plot files must be included in the same folder.</p> 

Topic	Feature Description
New Project Wizard	<p>Default Import of OpenStreet Map Tile Maps</p> <p>The option to automatically import the OpenStreet Map tile maps data is now selected by default when starting a new project.</p> <p>NOTE: Tile Maps are only available for users with a current maintenance agreement.</p> 
New Project Wizard	<p>New Range Checks for Starting Coordinates</p> <p>Checks were added to help avoid starting projects in an incorrect location. Conversion between UTM and Lat/Long values are now limited to valid UTM coordinate ranges.</p>
Met Pathway	<p>Data Quality Added to the Surface Met Data Section</p> <p>The Surface Met Data section was expanded to include data quality information regarding the percentage of calms and missing hours. This information can assist users in determining if their data meets minimum requirements.</p>  <p>Note: When number of missing hours exceeds 10%, the value is displayed in maroon color instead of black to warn modelers that the data may not be acceptable for regulatory applications.</p>

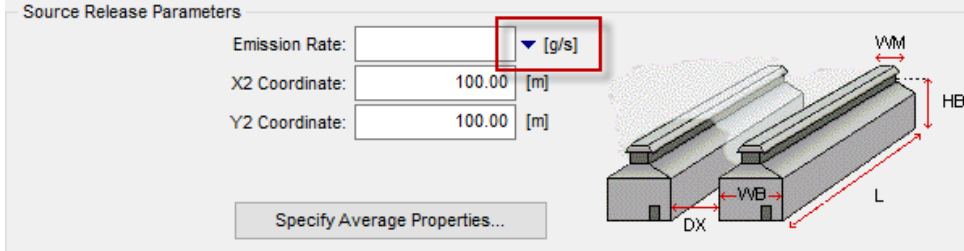
Topic	Feature Description
File Menu	Expanded Recent Files List The list of recent files in the File menu now displays the 6 most recently-opened files. Previously, this list was limited to 4 files.
Receptors	Uniform Cartesian Grid Default Coordinates When adding a uniform cartesian grid to a project, the default coordinates was changed from SW corner to center.
Export	XLSX Support for Exporting Buildings The Export Buildings command now defaults to XLSX format to allow for additional vertice pairs since XLS was limited to 255 columns.
Project Status	New Range Checks for Source Parameters Additional checks were added for Release Height and Exit Temperature values. A warning is issued if the Release Height exceeds 600 meters . An error is issued if the Exit Temperature is less than 200 K .
Project Status	Updated Building Downwash Checks When running AERMOD, additional checks were added to avoid automatic processing of BPIP-PRIME when a project contains no point or flare sources. For BPIP-PRIME processing, the error message now provides clarification regarding supported source types. 

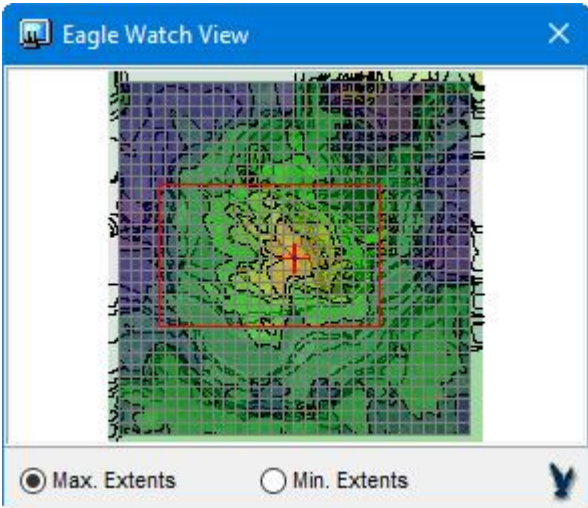
Topic	Feature Description
Terrain Processor	<p>New Receptor Warning</p> <p>The Terrain Processor now issues a warning if receptors are not present in the project and the user tries to run AERMAP as receptors are required to run AERMAP.</p> 
Graphical Options	<p>Project-Specific Color Mapping Settings</p> <p>Color Mapping selections made by the user will now remain selected after closing a project.</p> 

Topic	Feature Description
AERMET View	<p>Data Quality Added to Output Files Display</p> <p>The AERMET Output Files section was expanded to include data quality information regarding the number (and percentage) of calm or missing hours. This information can assist users in determining if their data meets minimum requirements.</p> <div></div> <p>Note: When number of missing hours exceeds 10%, the value is displayed in maroon color instead of black to warn modelers that the data may not be acceptable for regulatory applications.</p>
AERMET View	<p>Updated Month/Season Assignments for Southern Hemisphere</p> <p>The Assign Month/Season option in the AERSURFACE utility was updated so the default seasonal assignments reflect the local seasons.</p> <div></div>

Topic	Feature Description
AERMET & AERMOD View	<p>Order Met Data</p>  <p>The Order Met Data button was added to the Met Pathway window in AERMOD View and to the main window in AERMET View. This takes you to Lakes Environmental's Met Services webpage for ordering worldwide AERMET-Ready MM5 or WRF data or US-based AERMOD-Ready meteorological station data.</p> <p>https://www.weblakes.com/services/met_order.html</p>
Installation	<p>Prevention of Old Version Installation</p> <p>The application installation file was updated to no longer allow installation of previous releases when a newer version is already installed. The newer version must now be uninstalled before an earlier version can be installed.</p>

Fixed Issues

Topic	Issue Description
Control Pathway	Updated NOx to NO2 Options Heading <p>The group heading for the NOx to NO2 Options was updated for model version 16216r. The previous release incorrectly labeled these as Non-Default options when the Default options setting was used.</p>
Output Pathway	Rolling Averages <p>Support was restored for creating rolling average contour plot files without a corresponding percentile value specified. The process was also optimized to avoid running out of memory during calculation.</p>
Multi-Chemical Run	Fixed Status Messages <p>The Status column was updated to avoid false positive checks (e.g., "Bad Format" when not properly reading the meteorological data file locations).</p>
Import	Restored Import of Building Descriptions <p>When importing buildings from a BPIP input file, the description field was cut off if a space was present. This has been resolved.</p>
Reports	Output Type and Depletion Options Updated <p>The Control Pathway report was not properly printing the dispersion and depletion options. This has been resolved.</p>
Sources	Updated Buoyant Line Source Emission Rate Unit <p>The emission rate unit for buoyant line sources was updated to g/s after a clarification regarding a typo in the model documentation for the original implementation of this source type.</p> 

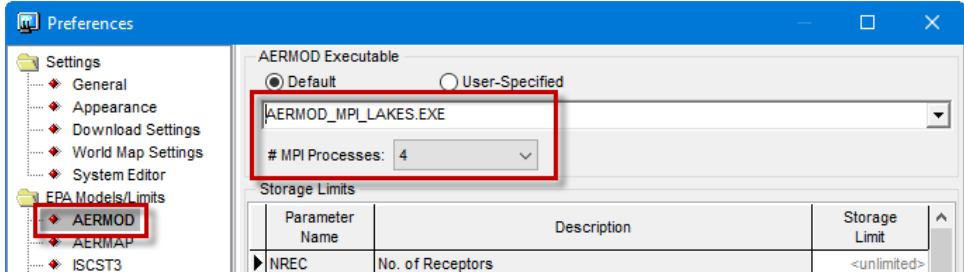
Topic	Issue Description
Buildings	<p>Reset Wind Flow Vector Window Location</p> <p>Previously, the window position of the GEP Structure Influence Zone's Wind Flow Vector was stored. This now resets to the default location so the window does not become lost off screen when using a different screen resolution from that which previously opened the project.</p>
Eagle Watch View	<p>Range Check Error Resolution</p> <p>The Eagle Watch View issued a "Range Check Error" when initially switching between the Max and Min Extents. This has been corrected.</p> 
AERMET View	<p>Seasonal Surface Parameters Label Updated</p> <p>When using the Seasonal Period option for defining surface characteristics, labels for Southern Hemisphere projects displayed seasonal names which could be misinterpreted. These labels have been replaced with months so users can be sure to which time period the specified values apply.</p>
AERMET View	<p>Upper Air Pathway Not Reading FSL Files</p> <p>AERMET View was not properly reading the longitude from FSL files due to a lack of spacing between the coordinates when the station had a longitude > 100°E. This has been fixed.</p>

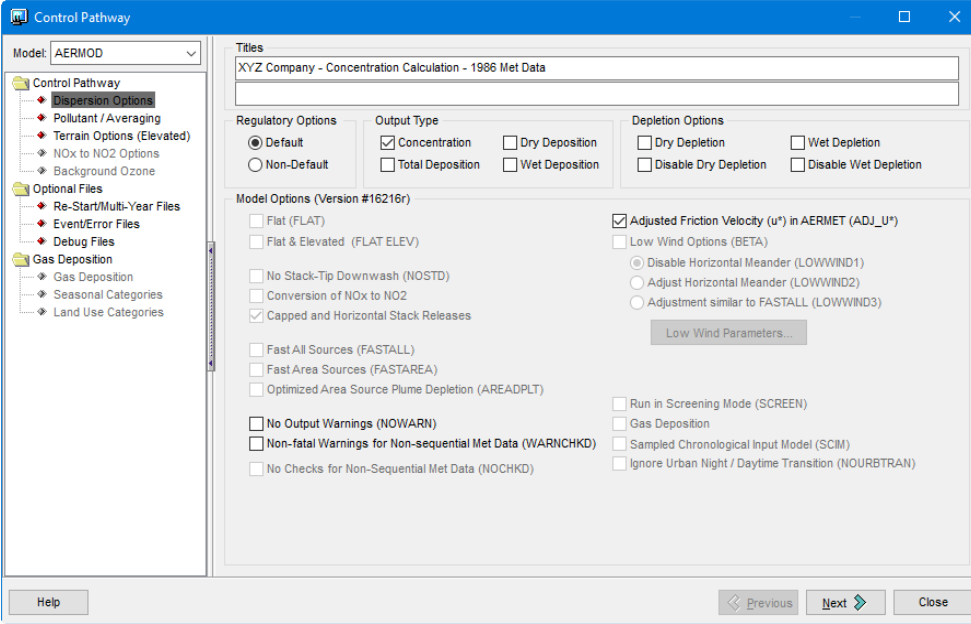
AERMOD View™ Version 9.3

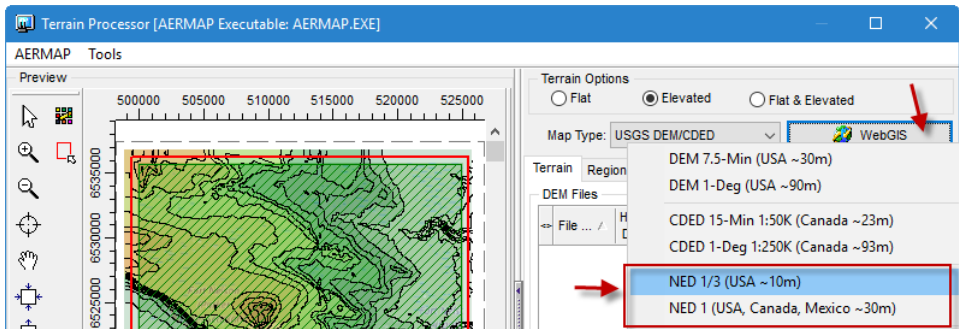

Release Notes

February 15, 2017

New Features

Topic	Feature Description
Models	<p>Latest Releases of US EPA Models Available</p> <p>The following US EPA Models were released in December 2016 and January 2017 and are incorporated into AERMOD View Version 9.3:</p> <ol style="list-style-type: none"> 1. AERMOD Model 16216r (Released January 2017) 2. AERMET Model 16216 (Released December 2016) 3. MAKEMET Model 16216 (Released December 2016) <p>Note: AERMOD 16216r will not run using met data created using AERMET 11059 or earlier. Old met data must be re-processed using a more recent version of AERMET (preferably 16216) or the modeler must use an older version of the AERMOD model.</p>
AERMOD MPI	<p>New Version of Lakes AERMOD MPI 16216r (Parallel Version)</p> <p>A new version of the Lakes AERMOD MPI for the US EPA Model Version 16216r is now available (AERMOD_MPI_Lakes_16216r.exe). You can specify to use this model under the Preferences dialog.</p> <p>Note: AERMOD_MPI_LAKES_16216r.EXE or AERMOD_MPI_LAKES.EXE will run the latest version of the AERMOD model (16216r) in parallel mode using <u>up to a maximum of 8 cores</u>.</p> 

Topic	Feature Description
Control Pathway	<p>Revamped Dispersion Options</p> <p>The Dispersion Options page has been reorganized to support the US EPA 16216r changes and maintain backwards compatibility for model versions 15181 and earlier.</p> <p>The Model Options group heading now confirms which version of the model is selected in Preferences, and options are enabled or disabled according to the model status (Default or Non-Default Regulatory Options).</p> 

Topic	Feature Description
Terrain Processor	<p>Updated NED Download Routines</p> <p>The process for downloading USGS National Elevation Dataset 1/3 arc-second (NED 1/3) and 1 arc-second (NED 1) data formats has been updated to reflect a name change implemented by USGS in their storage servers. The updated download includes updated tiles in some locations.</p> 
Plume Animation	<p>Implementation Updates</p> <p>Added options for selecting / de-selecting source groups when the Show Plume Animation option is enabled. Also, improved handling of source groups included adding warnings to the Details window to ensure the correct plume animation output is displayed.</p> 
Risk Mode	<p>Supported Feature Improvements</p> <p>Risk Mode was updated to integrate more fully the latest AERMOD model features. Changes include:</p> <ul style="list-style-type: none"> • Inclusion of circular area and polygon area source types in RiskGen • Incorporation of required gas deposition parameters for vapor and vapor mercury pathways • Updated program warnings and details messages to clarify project status. • Bug fixes and internal efficiency improvements
Project Status	<p>Improved Error Handling</p> <p>The Details and Warnings have been updated to provide additional information to users and prevent errors from occurring.</p>

Topic	Feature Description
AERMET View	<p>New US EPA AERMET Model Version 16216</p> <p>On December 20, 2016, the US EPA released a new version of the AERMET model (16216). For a complete description of the changes, please see the US EPA Model Change Bulletin #7 (MCB#7).</p> <p>This new AERMET model version was incorporated into the software as the default model version. Older model versions are also available.</p>
AERMET View	<p>Updated Group Heading</p> <p>The adjusted u-star (ADJ_U*) group heading was adjusted based on the US EPA 16216 model updates. When running AERMET 16216, the heading reflects the regulatory default status of this option (assuming no onsite turbulence data is included).</p> <div data-bbox="440 814 951 911"> <p>Non-Default Option (BETA)</p> <p><input type="checkbox"/> Adjust Surface Friction Velocity (ADJ_U*)</p> </div> <p><i>AERMET 15181 and earlier</i></p> <div data-bbox="440 974 951 1071"> <p>Low Wind Option</p> <p><input type="checkbox"/> Adjust Surface Friction Velocity (ADJ_U*)</p> </div> <p><i>AERMET 16216</i></p>
MAKEMET Utility	<p>New US EPA MAKEMET Model Version 16216</p> <p>On December 20, 2016, the US EPA released a new version of the MAKEMET model (16216). The MAKEMET Utility was updated to use this version of the executable.</p>

Fixed Issues

Topic	Issue Description
Source Pathway	Set All Gas Deposition Parameters to Real Values In previous versions, input values not explicitly listed as real values would be written as integers. This lead to an 'illegal numerical field' error. The application now correctly writes these values as reals in the input file.
Source Pathway	Copy / Paste Update for Gas & Particle Data Resolved a problem where the copy and paste buttons on the Gas & Particle Data settings would be lost when modifying the Source ID of the pasted parameters.
Meteorology Pathway	Updated MAXDCONT # Met Years Option Fixed an issue where the drop-down box for the # Met Years field would not appear even when input criteria was met.
Receptor Pathway	Discrete Polar Receptor New Button Previously, discrete polar receptors could only be added using the Tab or Arrow Down keys as the New button would produce an error. This has been fixed.
Import	Import Buildings from BPIP Input File Updated the process for importing buildings from existing BPIP input files. The update allows for expanded support for non-standard input file conventions.
Percentiles	Updated Date and Rank Columns in Contour Plot Files When preparing percentile contour plot files, the date and rank columns were filled in with data from a different receptor reference than the receptor containing the reported concentration. The columns now reflect the values associated with the reported concentration. This update does not change calculated concentration values.
Multimedia	Restored Codec Selection When choosing Advanced Settings for recording animations, the Select Codec button did not always work. This has been restored.

Topic	Issue Description
MAXTABLE Viewer	Table Sort Update When sorting the MAXTABLE Viewer data value column (e.g., Concentration, Dry Deposition, etc.), the value was sorted as a string instead of number. This has been resolved.