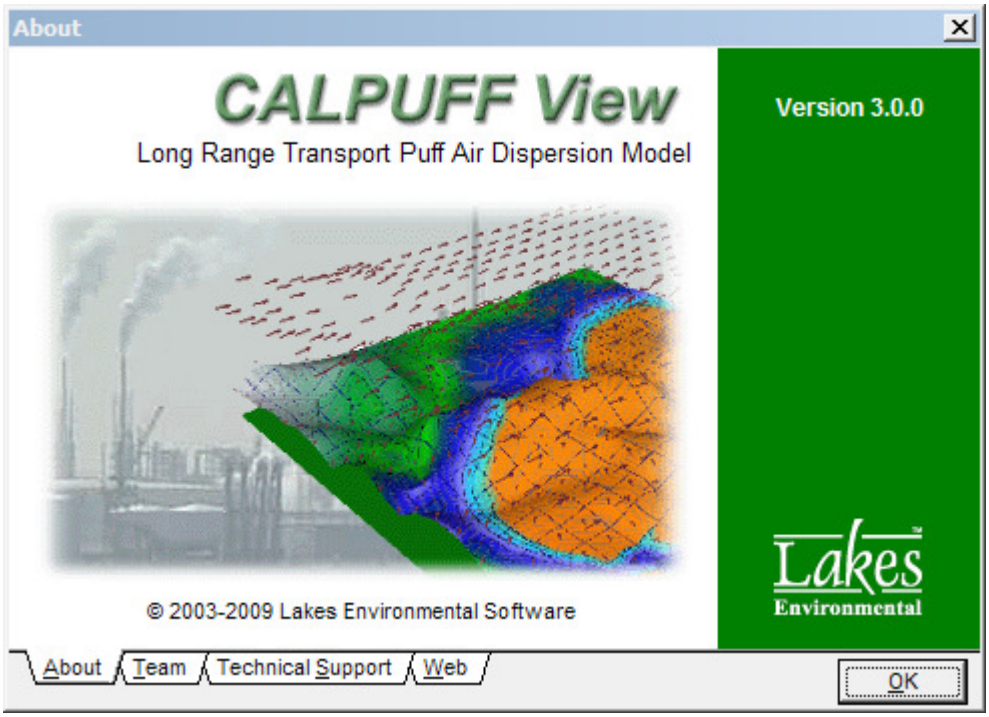
CALPUFF View™

Graphical Interface for the US EPA Approved Long Range Transport Model - CALPUFF

These release notes cover CALPUFF View Version 3.0.0. They provide:

New Features

Resolved Issues



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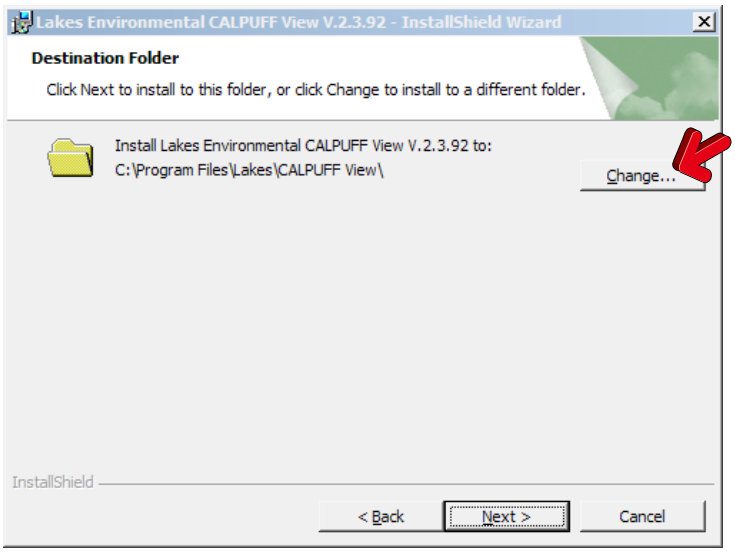
Lakes Environmental

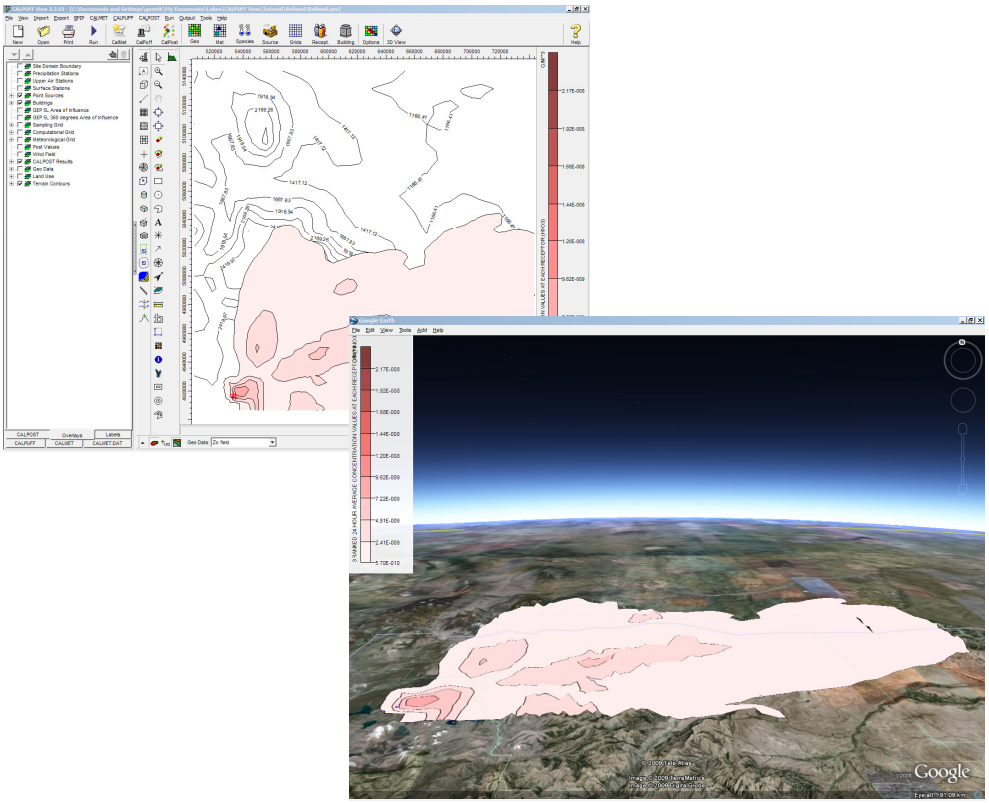
CALPUFF View™ Version 3.0.0

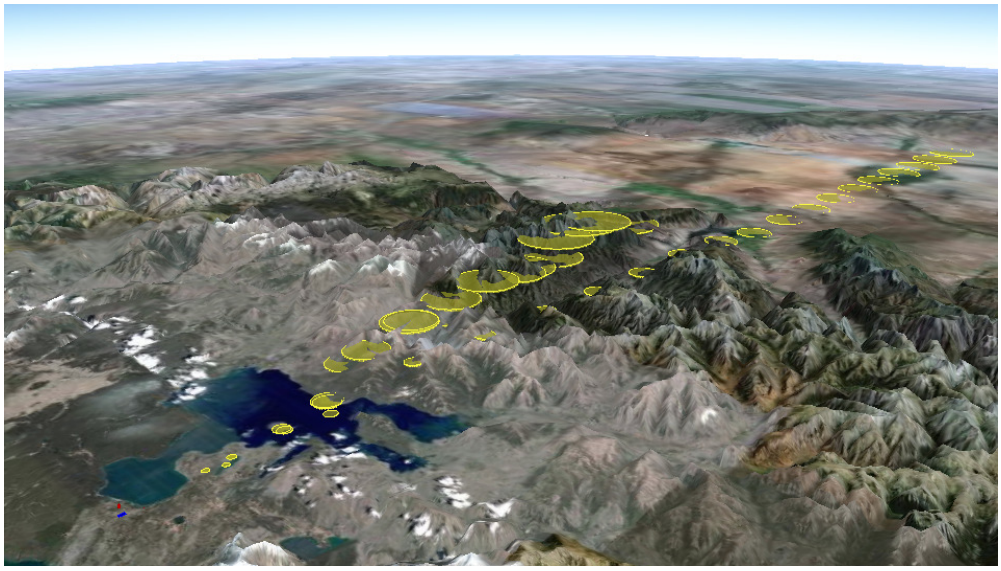
Release Notes

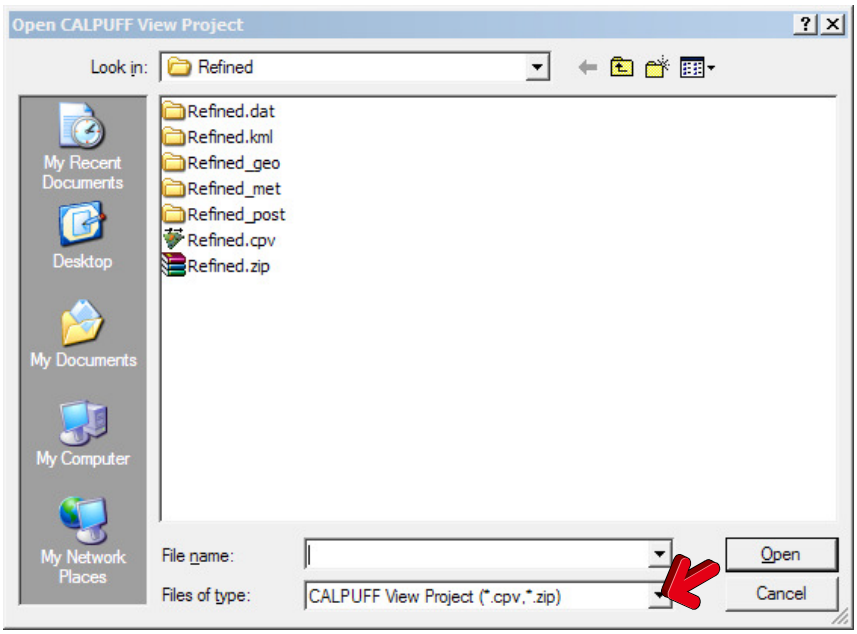
5 June, 2009

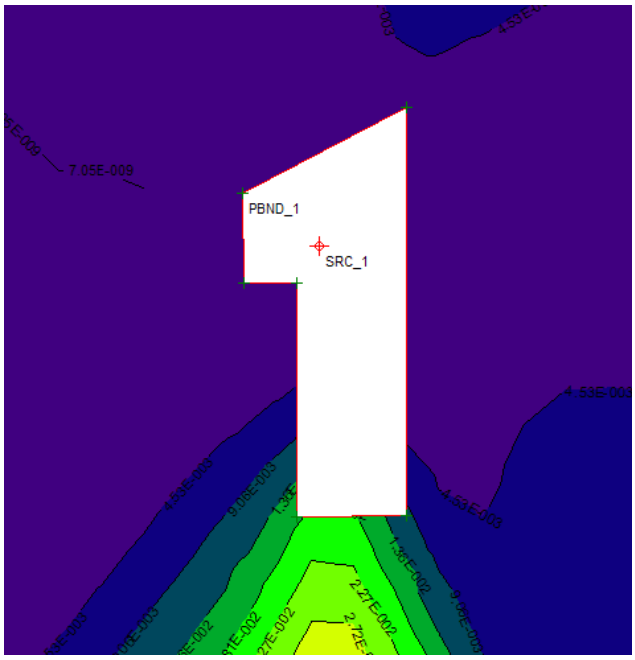
New Features

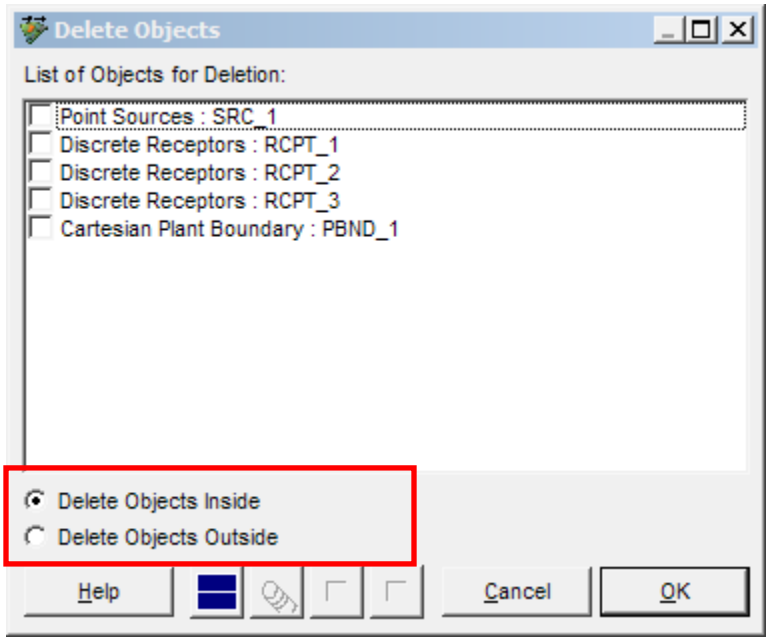
Topic	Feature Description
Install	**Microsoft® Windows VISTA® and 64-Bit OS Installation Compatible** CALPUFF View Version 3.0.0 is now fully compatible with the Windows VISTA operating system and 64-bit Windows operating systems. The default installation path for CALPUFF View has changed: ▪ **Old path:** C:\Lakes\CALPUFFView ▪ **New Path:** C:\Program Files\Lakes\CALPUFF View The tutorial files are now being installed by default under the "My Documents" folder: ▪ **Windows VISTA:** C:\Users\[UserName]\Documents\Lakes\CALPUFF View\Tutorial ▪ **Windows XP & 2000:** C:\Documents and Settings\[UserName]\My Documents\Lakes\CALPUFF View\Tutorial\ **Note:** Please note that the tutorial files must be installed in a folder where the user has **Full Rights**. During installation, you will be able to specify where to install the tutorial files. 

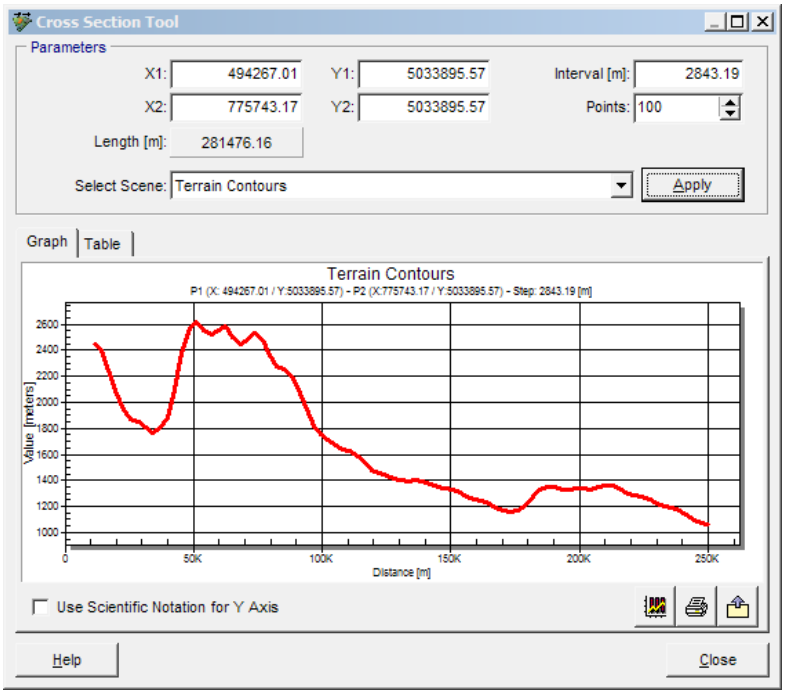
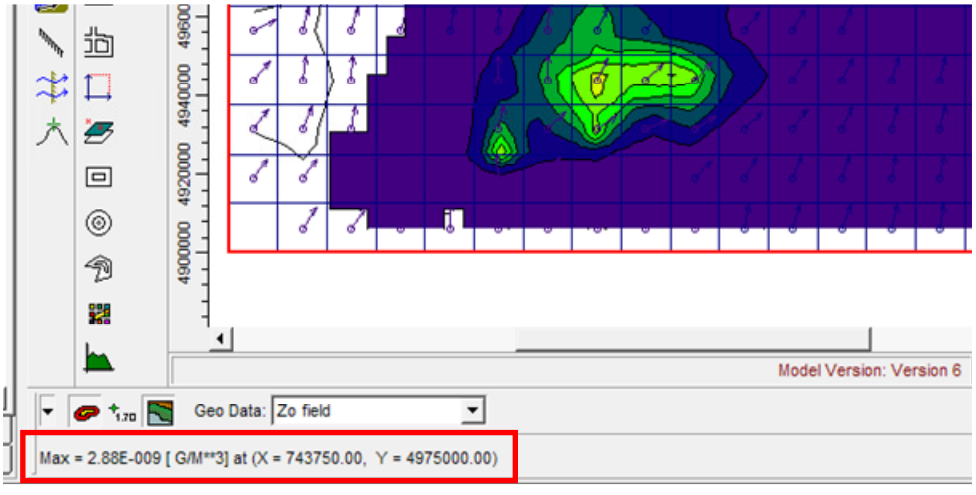
Topic	Feature Description
Models	**Current TRC Models Supported** The latest version of the CALPUFF modeling system is now supported by CAPUFF View; this includes the EPA approved version (5.8) and the latest version from TRC (6). The supported model versions are: CALMET: 5.8 (070623) and 6.326 (080709) CALPUFF: 5.8 (070623) and 6.262 (080725) CALPOST: 5.6394 (070622) and 6.221 (080724) Additionally, CALPUFF version 5 is no longer supported by CALPUFF View.
Export	**Export to Google Earth™ Mapping Service** CALPUFF View provides you with the ability to export several project layers such as sources, receptors, buildings, and output contour results to Google Earth. This type of visualization allows you to clearly envision your project and its results using the high quality images provided by **Google Earth**. You can access the *Export to Google Earth* dialog by selecting **Export | Google Earth** from the main menu. **Disclaimer:** Please note that you must have Google Earth installed in your computer to be able to visualize the exported KML (Keyhole Markup Language) file. You are responsible on purchasing the Google Earth product that meets your organization's needs. Lakes Environmental does not authorize or license any of the Google Earth products for your use. 

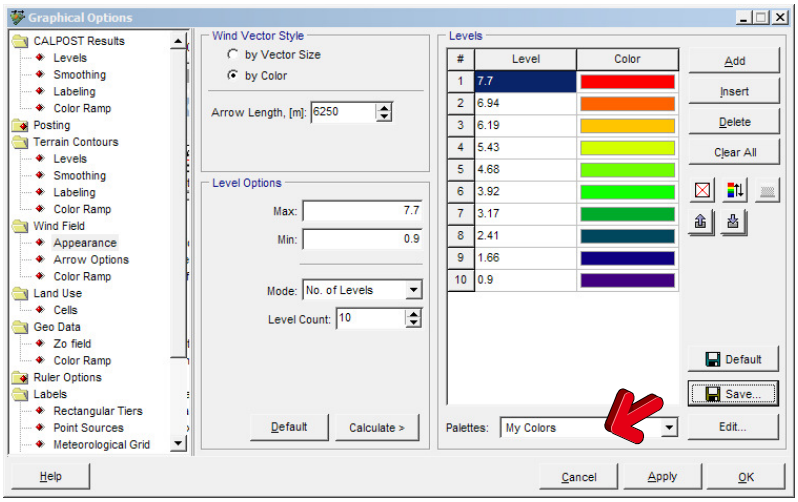
Topic	Feature Description
Export	**Puff Tracking in Google Earth** It is now possible to export an animation of puff movements to Google Earth through the kml file type. This makes it possible to see the exact puff movements for any period in your CALPUFF project. 

Topic	Feature Description
Open Project	**Open Project from ZIP Available from Open Project Option**  Now you can also open projects from a backup ZIP file through the **Open Project** option. Press the Open toolbar button or select **File | Open Project** menu option and then select the project zip file. A warning message is displayed in case you already have a project with the same name in the selected folder. This new option has the same functionality of the existing menu option **File | Backup | Extract from ZIP**. **Note:** This option is also available in Rammet View. 
Open Project	**Open Projects by Double-Clicking on Project File** You can now double click on any project file (e.g., *.cpv, *.ram) to automatically open the selected project by the respective application. You can identify the project files by the icon being displayed and file extension as seen below: • CALPUFF View (*.cpv)  Rammet View (*.ram) 

Topic	Feature Description
Graphical Tool	**Plant Boundary Tool** A plant boundary tool has been added, allowing you to create plant boundaries and the hide contours within the plant boundary. 

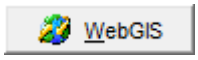
Topic	Feature Description
Graphical Tool	**Additional Delete Tools** Additional Delete tools were implemented. See the functionality of each one of these tools below:  **Point/Rectangular Delete Tool:** This tool allows you to delete a specific object or objects inside or outside a user specified rectangle.  **Circular Delete Tool:** This tool allows you to delete a specific object or objects inside or outside a user specified circle.  **Polygonal Delete Tool:** This tool allows you to delete a specific object or objects inside or outside a user specified polygon. A new option was implemented in the *Delete Objects* dialog that allows you to specify if objects to be deleted are inside or outside the shape (rectangular, circular, or polygonal) digitized using one of the delete tools described above. 

Topic	Feature Description
Graphical Tool	**Cross Section Tool**  The *Cross Section* tool, located on the Annotation Toolbar, allows you to graphically define a line segment within your modeling domain for which you would like to view available data (e.g., terrain elevations, concentrations). The data is displayed both in table and graph format. 
Graphical Options	**Maximum Concentration Display** The maximum concentration, and its location, for the currently displayed plot is shown at the bottom of the CALPUFF View window. 

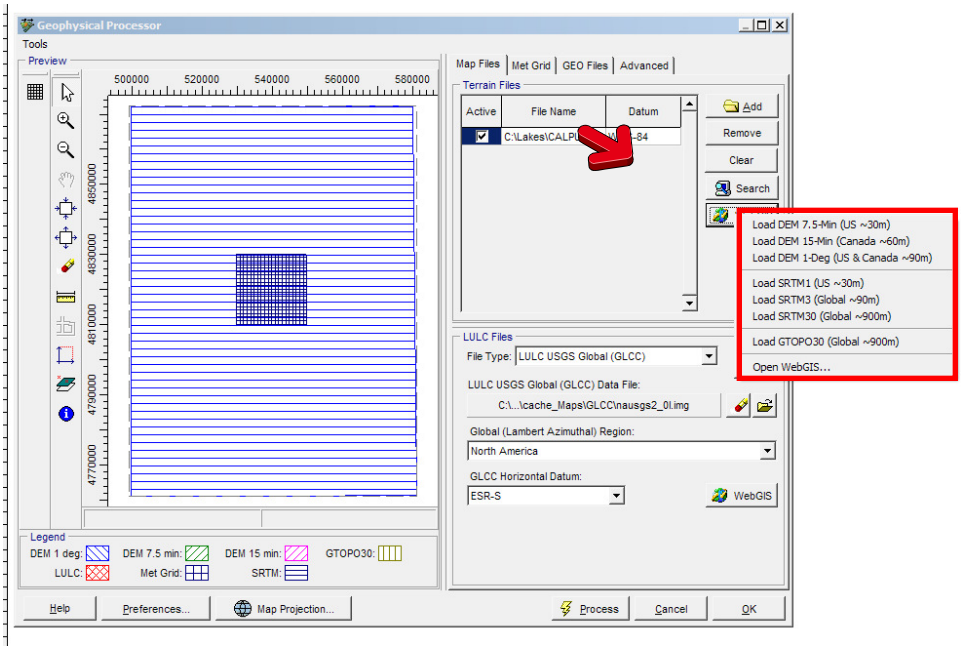
Topic	Feature Description
Graphical Options	**Sharing User-Defined Palettes Between all Lakes Applications** Now your user-defined palettes are shared between all Lakes Environmental applications. 
General	**Scroll Wheel Zoom** The mouse scroll wheel zoom has been reversed so that it will zoom in if you scroll up and will zoom out if you scroll down.
GeoPhysical Processor	**Updated GeoPhysical Processor** The Geoprocessor has been updated; some of the new features include: ▪ A tools menu ▪ Ability to specify the SW corner or the center of the met grid ▪ Improved File Search ▪ Ability to import elevations from the GEO.DAT file for objects that were created prior to the running of the Geophysical Processor

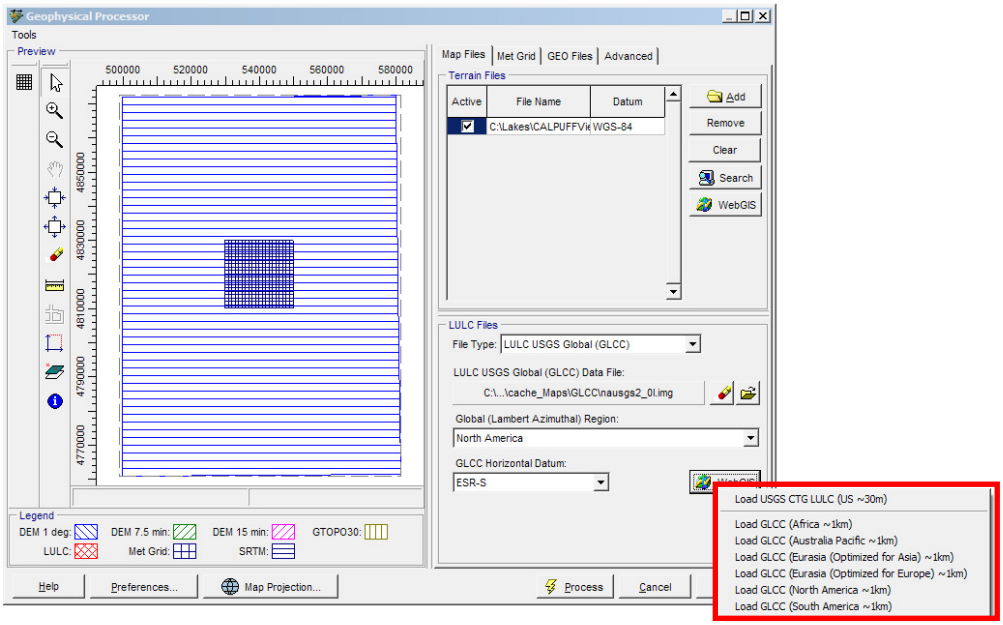
Topic	Feature Description
Terrain	**Automatic Download of SRTM, GTOPO and Canadian DEM Terrain Data** The **Geophysical Processor** has been updated to allow the automated download of Shuttle Radar Topography Mission terrain data files (SRTM) and GTOPO30 files. The table below shows the available formats and resolutions:

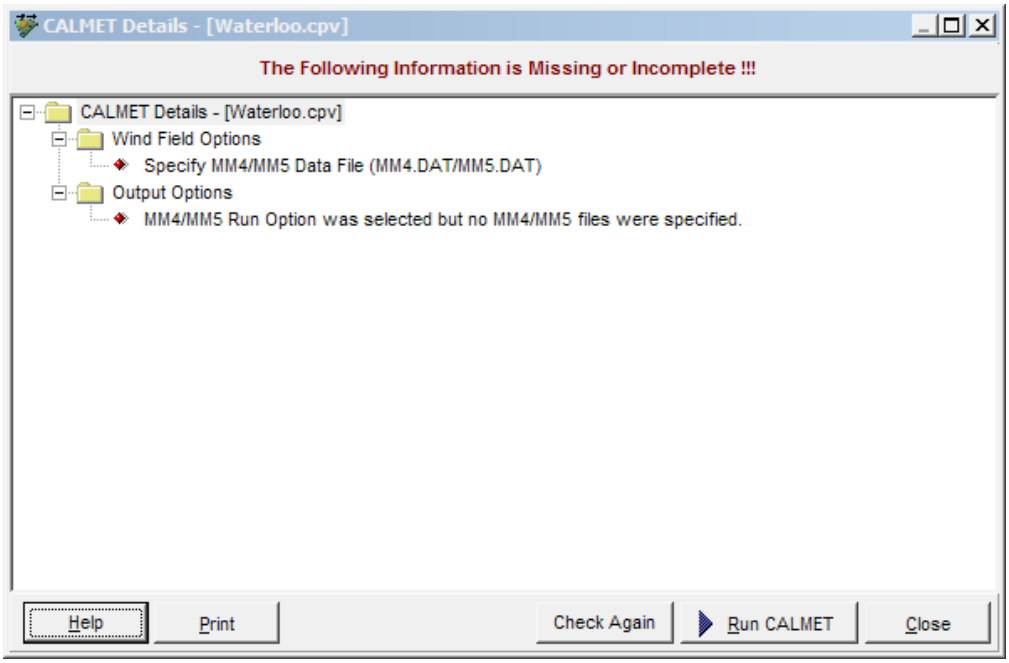
Terrain File Format	Available Free Download	Resolution
DEM, 7.5 min	USA, Canada	1 arc-sec, ~30m
DEM, 15 min	Canada	2 arc-sec, ~60m
DEM, 1 deg	USA	3 arc-sec, ~90m
SRTM3 – Version 2	Global	3 arc-sec, ~90m
SRTM30	Global	30 arc-sec, ~1km
SRTM1 – Version 2	USA	1 arc-sec, ~30m
GTOPO30	Global	30 arc-sec, ~900m

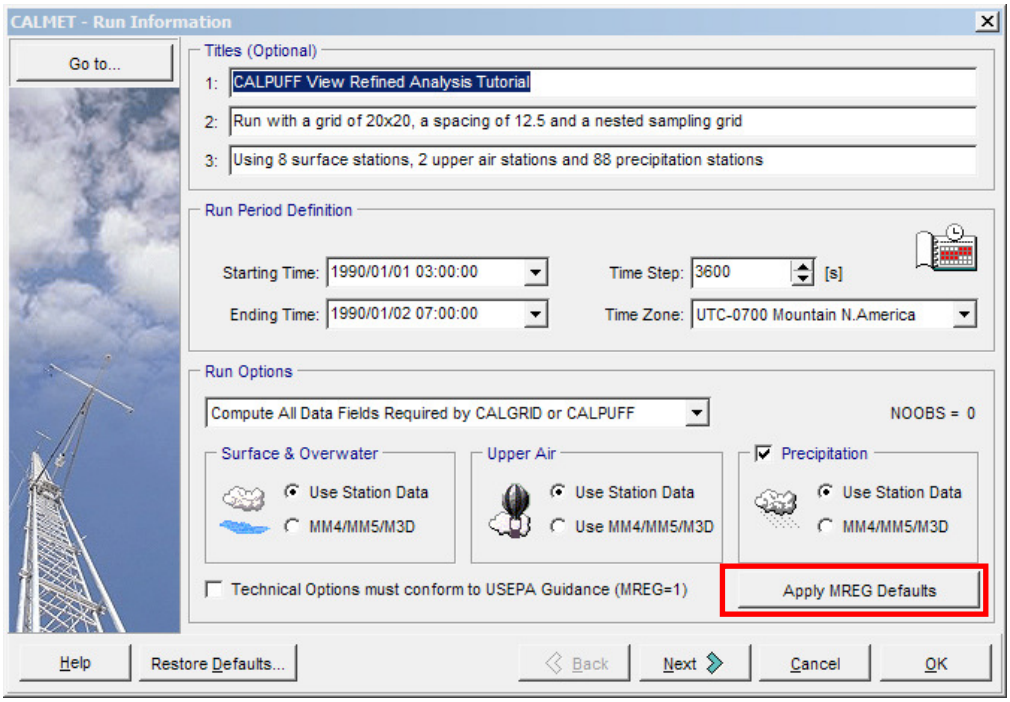
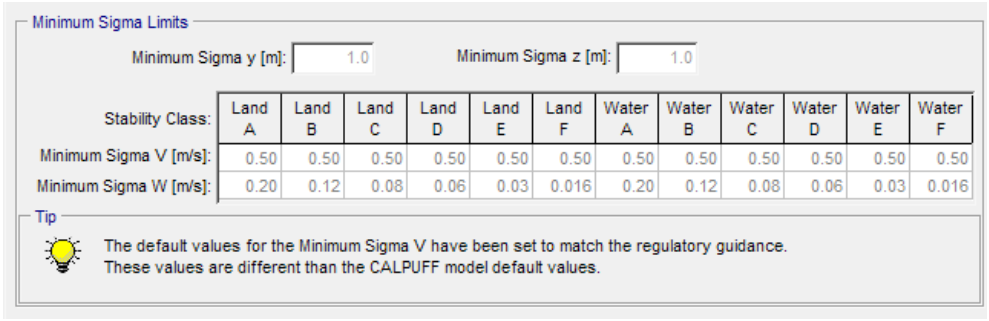
To use the automated download function press the 

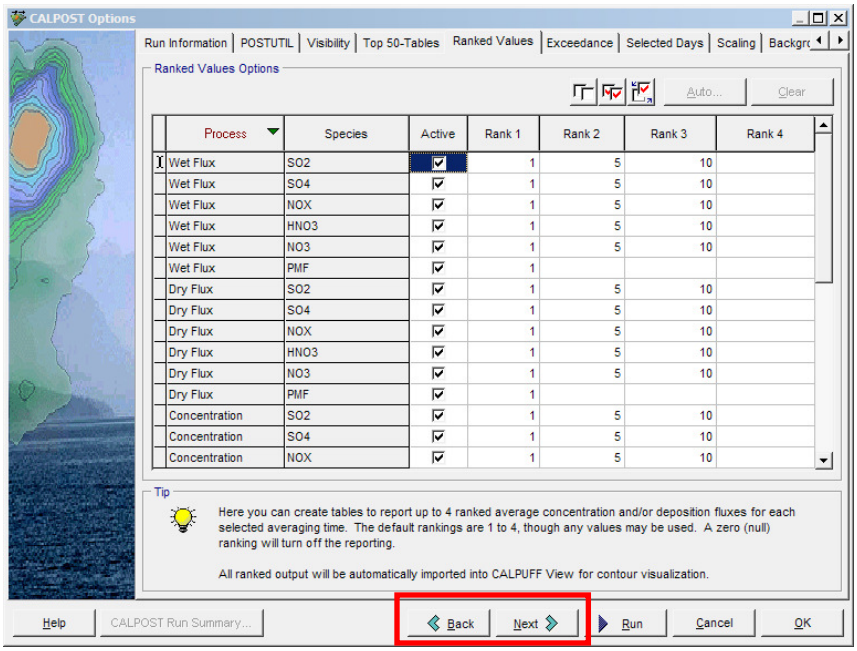
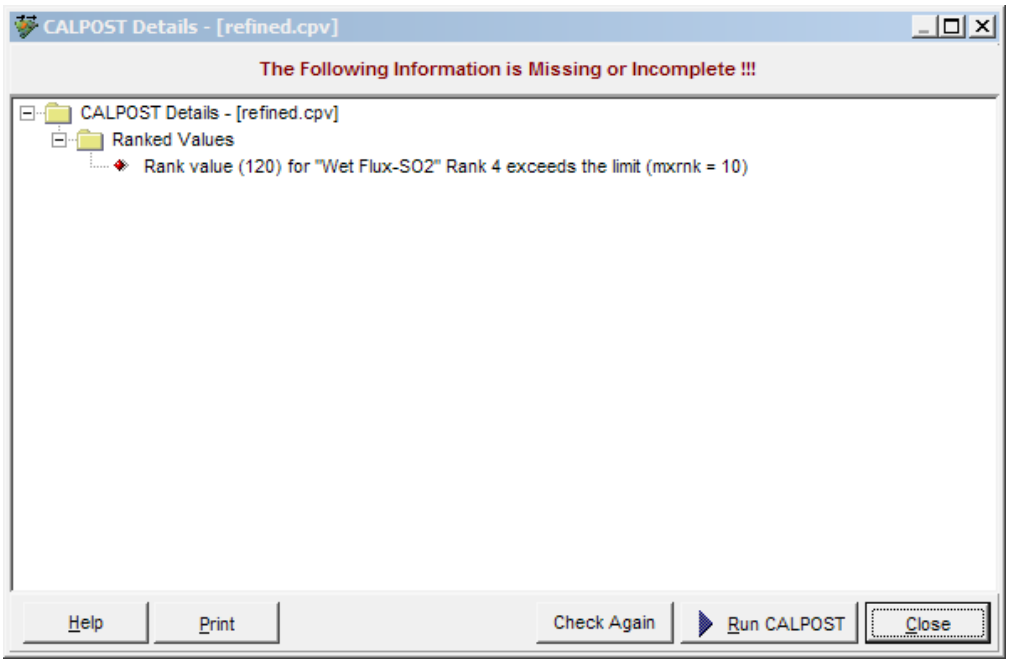
button to display the available terrain data file options, select the format you wish to download. All terrain data files available for your modeling area are automatically downloaded from Lakes Environmental WebGIS.com and stored under the "cache_Maps" folder for future use.

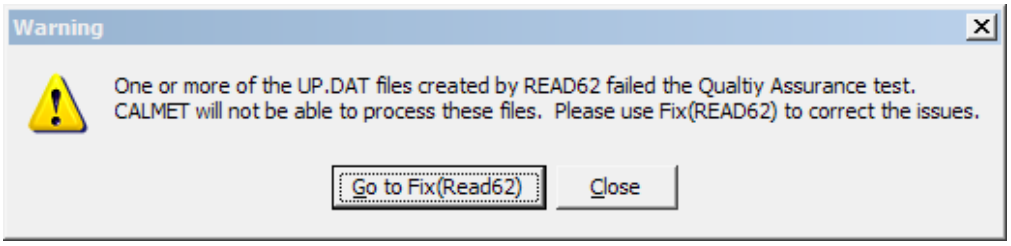
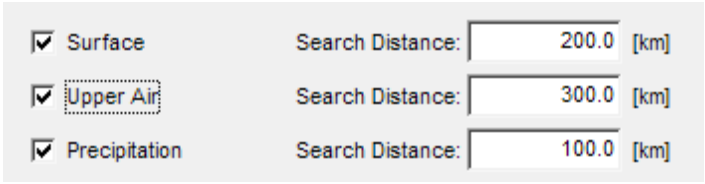
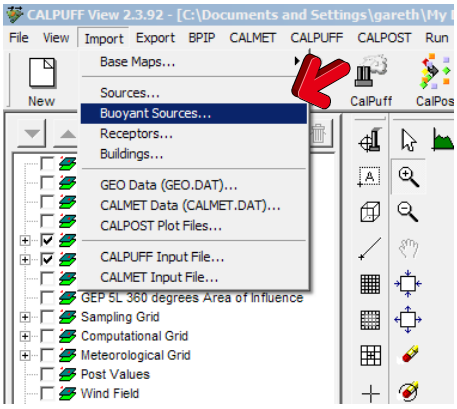


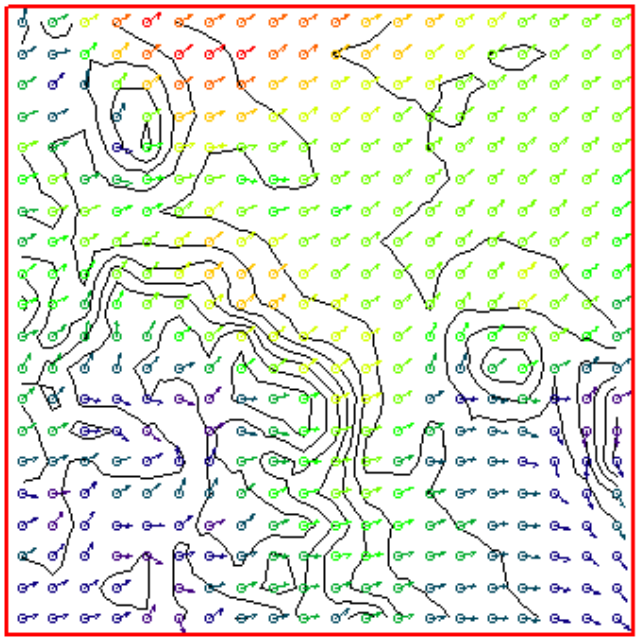
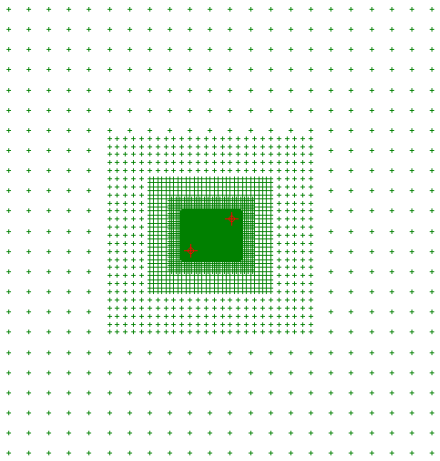
Topic	Feature Description
Land Use	**Automatic Download of US NLCD92 and GLCC Global Land Use Data** The **Geophysical Processor** has been updated to allow the automated download of US NLCD92 and GLCC Global Land Use Data – this provides global coverage for the land use data required to run the Geoprocessor.  Note: Using NLCD92 data for larger modeling domains may cause long run times for the GeoProcessor

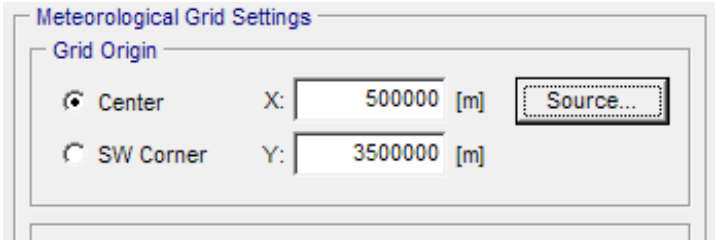
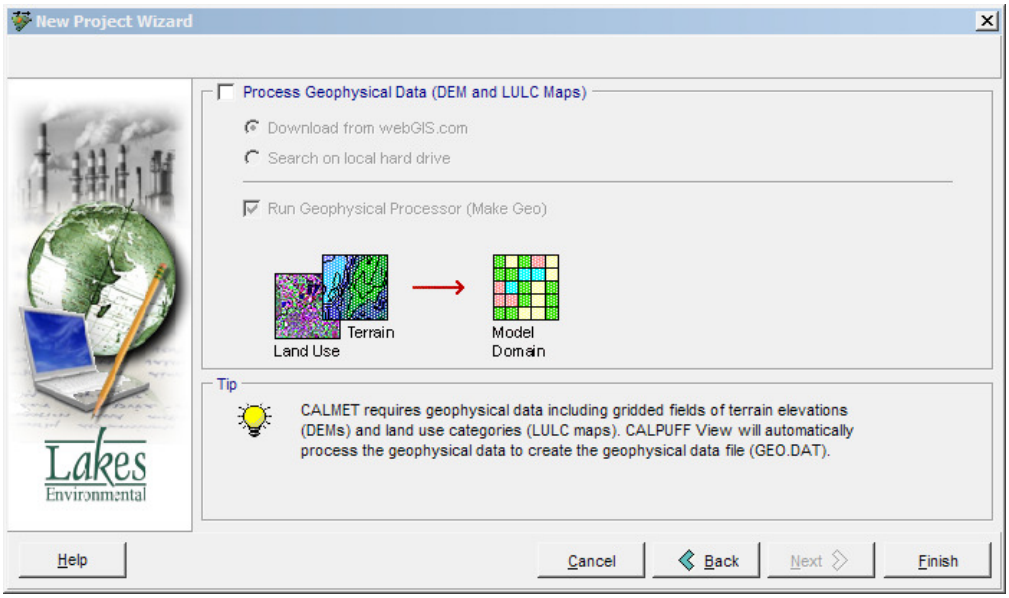
Topic	Feature Description
CALMET	**Smart Option Selection for MM5** When MM5 is selected in CALMET (NOOBS = 1 or 2), other options are automatically set to suit MM5 use: • Use Prognostic Wind Fields is selected • "Do Not Extrapolate" for Vertical Extrapolation of Wind Fields is selected • "Generate Cloud Cover from Prognostic RH" is selected
CALMET	**MM5 Warning** A warning message has been added when the user tries to run CALMET without MM5 data specified (when a NOOBS value has been selected that requires MM5). 

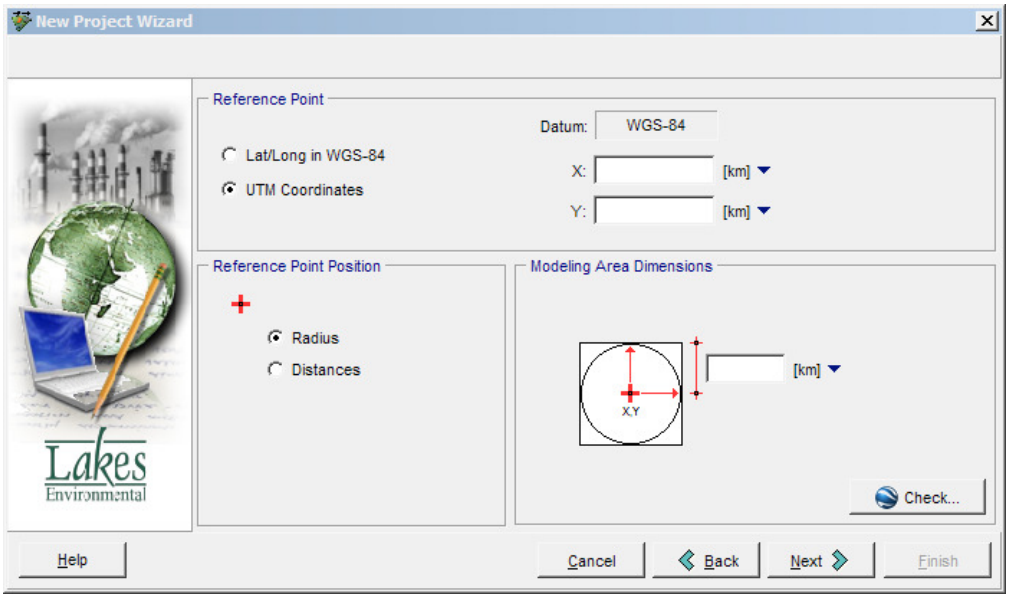
Topic	Feature Description
CALMET **CALPUFF**	**Regulatory Settings Button** The CALMET and CALPUFF Wizards now include a regulatory default (MREG) button that will automatically apply the required regulatory settings to the project. 
CALPUFF	**SVMIN – Regulatory Setting** In version 5.8 of CALPUFF, the parameter SVMIN is now set to the EPA recommend value, rather than the TRC default value. 

Topic	Feature Description
CALPOST	**Back/Next Buttons** Back and Next Buttons have been added to the CALPOST Options dialog. 
CALPOST	**CALPOST Rank Values** A Warning has been added when the user tries to run CALPOST with a rank value that is greater than what is allowed by the specified CALPOST executable. 

Topic	Feature Description
Met Processor	**Fix (READ62) Warning** When processing upper air data in the Met Processor, if READ62 is unable to create complete UP.DAT files the user will be prompted with a warning. The user can then choose to proceed to Fix (Read62) to correct the problem. 
Met Processor	**Search Domain** The station search domain in the met processor is now specific to each station type; surface, upper air and precipitation, and has been made more visible. 
Import	**Import Buoyant Area Sources from Excel** Buoyant area sources can now be imported from an Excel file into a BAEMARB.DAT file. An Excel template is located in C:\Program Files\Lakes\CALPUFF View\Templates. The import option is available from **Import | Buoyant Sources**. 

Topic	Feature Description
3D View	**Wind Field Display** By Default, CALPUFF View now displays the wind field as colored arrows (color representing speed) rather than as vectors. 
Grids	**Nested Receptor Grids** A Nested Receptor Grid tool has been implemented that allows for the creation of tiers of receptors of different spacing. Each tier extends a user specified distance from a bounding box that includes one or more sources. 
Grids	**Computational Grid Update** If the computational grid has the same dimensions as the meteorological grid, it will automatically resize to match the meteorological grid if the meteorological grid is resized.

Topic	Feature Description
Grids	**Center Grid on Source** It is now possible to specify a grid location using the center of the grid as the reference point, this is includes the meteorological, nested receptor and ring receptor grids. The center coordinate may also be chosen to match the coordinates of an existing source. 
New Project Wizard	**Automatically Process Geophysical Data** The New Project Wizard does not process geophysical data by default. This option is still easily selected from within the Wizard. 

Topic	Feature Description
New Project Wizard	**Updated New Project Wizard** The New Project Wizard has been updated, including easier methods of specifying your modeling domain, as well as an option to verify your domain in Google Earth. 
New Project Wizard	**Units for distances** The UTM reference point and the site domain dimensions in the New Project Wizard can now be specified in meters or kilometers.
Help	**Updated Help Files** The help files for all applications within the CALPUFF View package were updated to include the description of all new features.
Help	**Link To Knowledgebase** There is now a like to the CALPUFF View online knowledge base under the Help menu.

Resolved Issues

Topic	Issue Description
CALPUFF	**Incomplete Message for Output Groups** When Output Groups were selected in CALPUFF, a Project Incomplete message would be given at run time which incorrectly stated that the Geometric Standard Deviation must be greater than zero. This has been corrected.
Sources	**Deleted Parameters when Making Sources Inactive** When making sources inactive through the source list, some source parameters were being deleted from the source; this has been fixed.
Import	**Import from AERMOD Input – Hill Height Error** In some cases hill heights in an AERMOD input file were being imported as receptor flagpole heights. Flagpole heights are now correctly identified.
Import	**Imported Plot Files** Imported plot files are now shown in the CALPOST tab under their own category, rather than replacing the existing plot files.
Buildings	**Tier Height Swapping** In some cases building tier heights were being swapped between tiers; this no longer occurs.
Buildings	**Elevations of Buildings Imported from BPIP input files** In some cases, elevations of buildings imported from BPIP input files were not being assigned, this has been resolved.
Sources	**Area Source Import** An error has been corrected where the y coordinates of area source vertices were incorrectly imported when using the import from Excel option.
CALMET	**Sub-Hour Wind Fields** Previously wind fields from CALMET.DAT files that were less than one hour in length were not being displayed in CALPUFF View; it is now possible to visualize these wind fields.
Models Check	**POSTUTILL.EXE Check** The Models Check tool now correctly looks for POSTUTILL.EXE rather than POSTUTIL.EXE.

Topic	Issue Description
CALPUFF	**Geometric Standard Deviation** CALPUFF View was incorrectly giving a warning when the geometric standard deviation for species was set to zero.
New Project Wizard	**Back Button with Geographical Reference Point** If the reference point was specified in latitude and longitude, and the user clicked Back to return to the reference point page in the New Project Wizard, an error was given. This has been corrected.
New Project Wizard	**UTM Check** The acceptable range of UTM coordinate values has been updated.
General	**Decimal Places** Throughout the interface, more appropriate numbers of decimal places are show, depending on the specific setting.
CALMET	**Station List Updates** The station lists on the Modules/Stations page of the CALMET Wizard are now automatically updated each time the met processor is run.
CALMET	**MM5 Support** CALMET now supports more recent MM5 file formats
Wizards	**Restore Defaults** The restore defaults buttons found in the CALMET and CALPUFF Wizards have been reviewed and updated to reflect the latest default values.