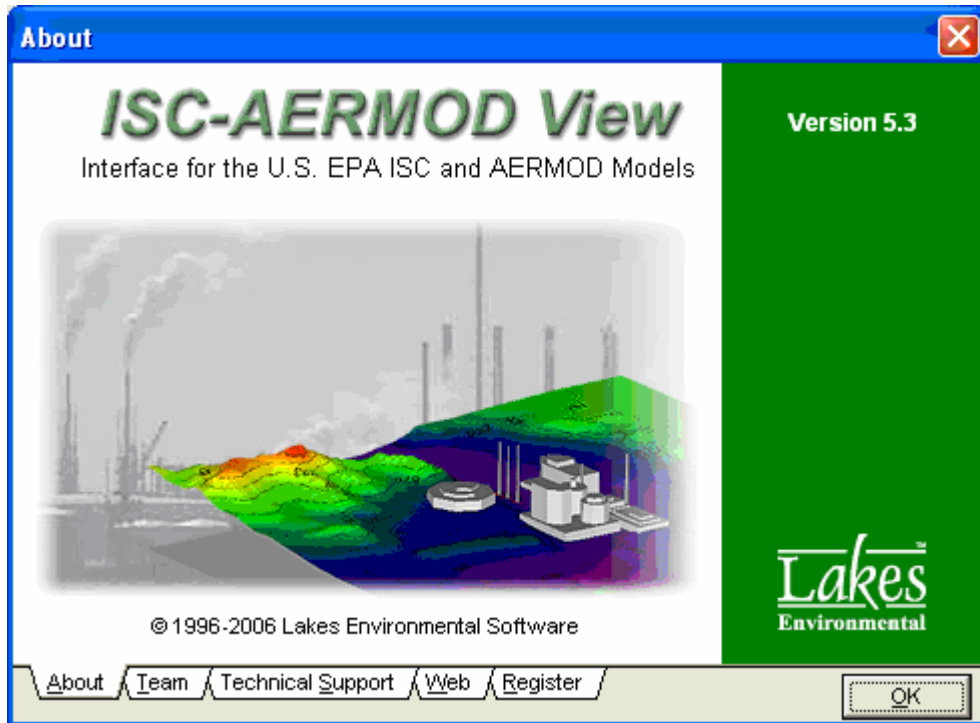# ISC-AERMOD View Package

Interface for the US EPA ISC and AERMOD Models

Release Notes
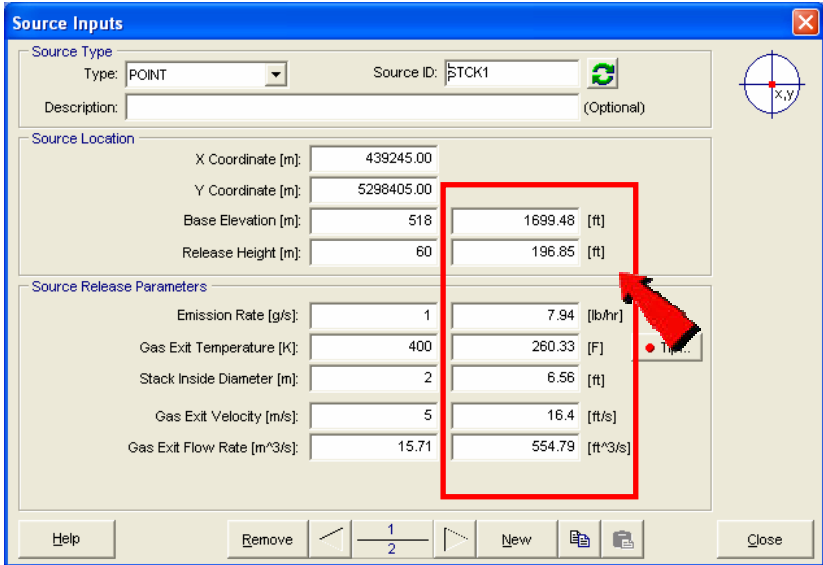
[Release Notes – Version 5.3](#)

Lakes Environmental Software
Tel: (519) 746-5995
Fax: (519) 746-0793
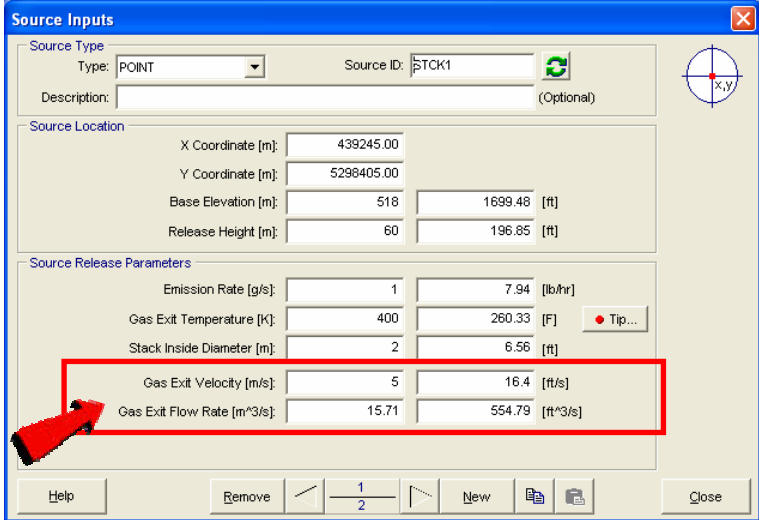e-mail: support@weblakes.com
web site: www.weblakes.com
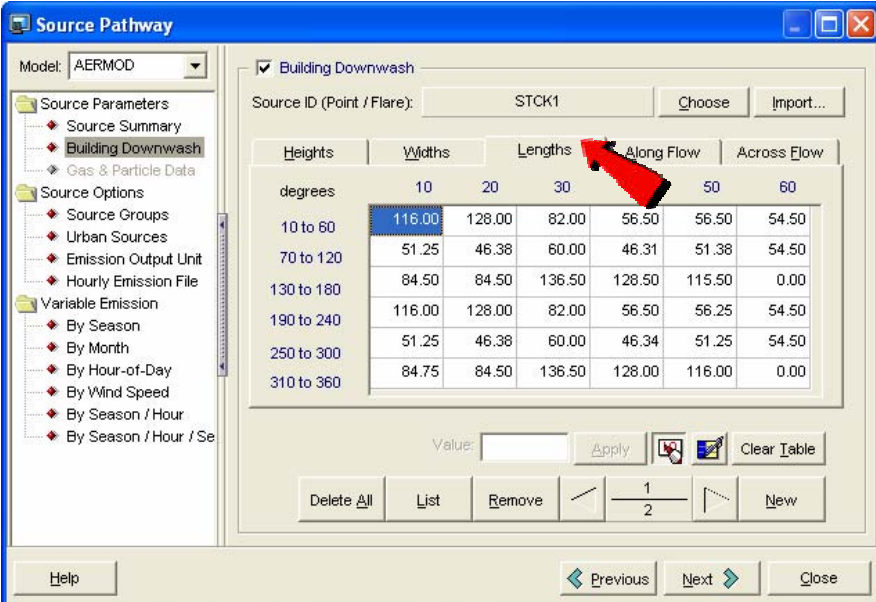
ISC-AERMOD View Package
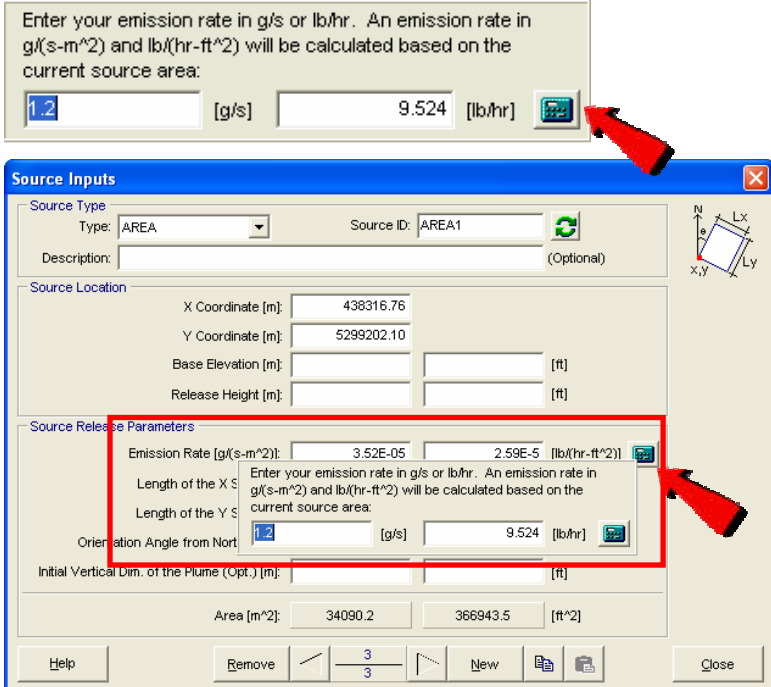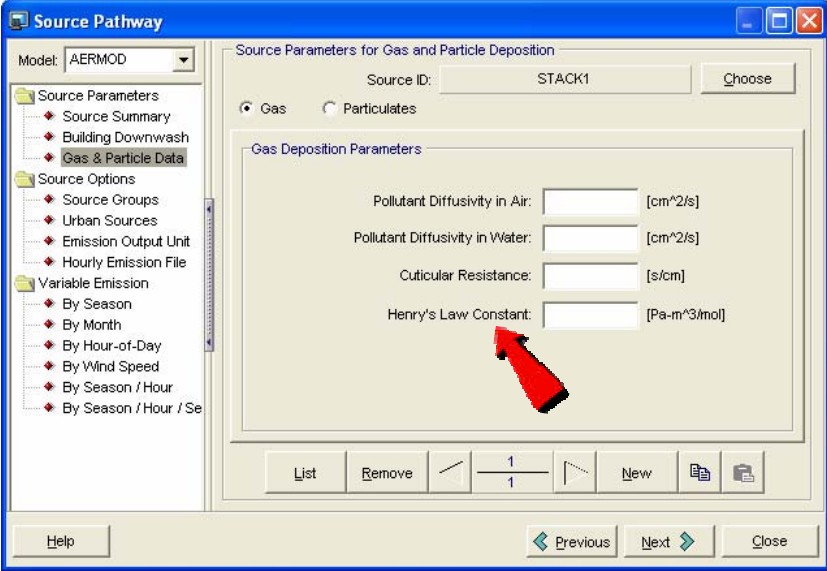## Version 5.3
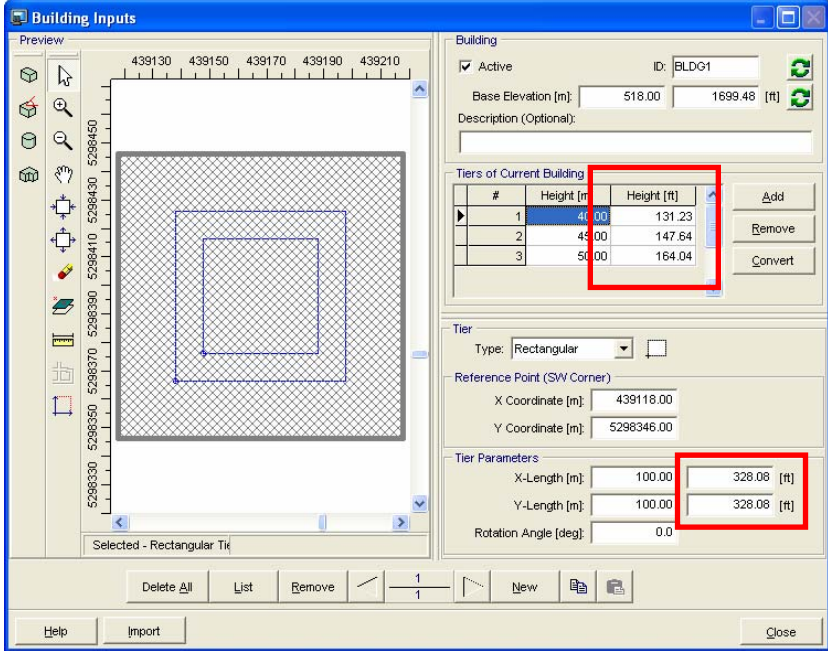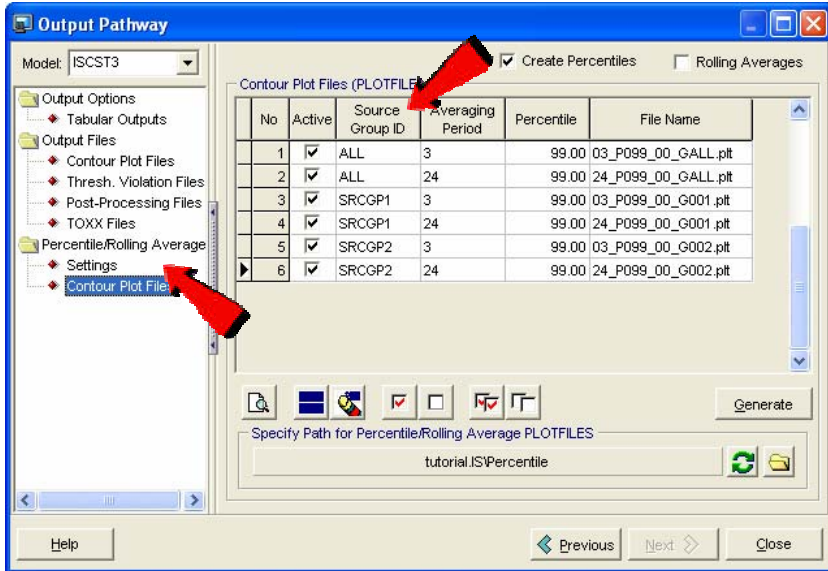
Release Notes

June 14, 2006

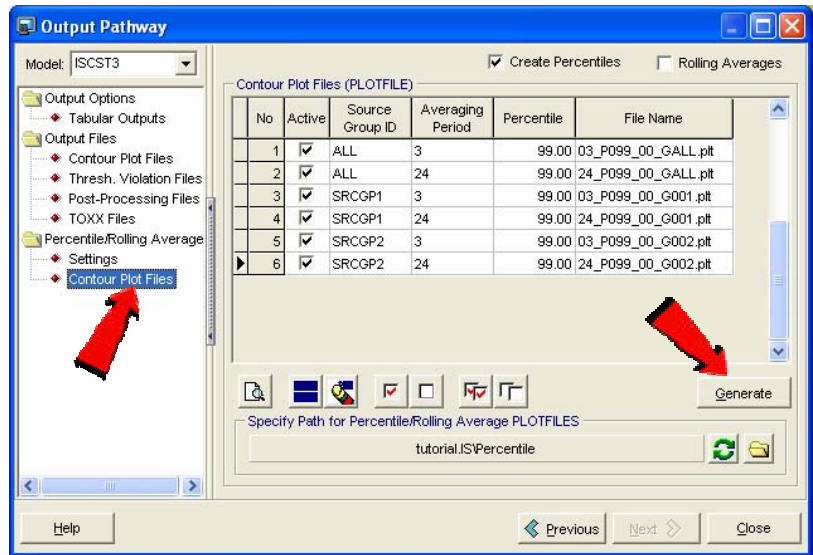| Topic	Feature Description
Source Pathway	**Source Input Data in Metric or English Units** Source parameters can now be entered in the interface in either metric or English units. You can enter a value as a metric unit and the value will be converted to an English unit and vice versa. Model input files are still written in metric units because of model limitations.

Topic	Feature Description
Source Pathway	**Option to Specify Stack Gas Exit Flow Rate** For Point Sources, you can now specify the Gas Exit Flow Rate and the Gas Exit Velocity will be automatically calculated and vice versa.
Source Pathway	**Auto-Calculate Area Emissions in g/s-m^2** A tool to auto-calculate the emission rate for Area and Open Pit sources in g/s-m^2 was implemented in the *Source Inputs* dialog. The user can now specify emissions for the entire area in g/s and ISC-AERMOD View will calculate the emission rate in g/s-m^2 based on the specified area of the source.

Topic	Feature Description
Source Pathway	**Henry's Law Constant under Gas & Particle Data** In order to accommodate values that exceed four decimal places, the Henry's Law Constant under the Gas Deposition Parameters, Gas & Particle Data section in the Source Pathway is now written to the AERMOD input file in scientific notation.
Source Pathway	**Building Downwash Data for AERMOD** The building downwash table for AERMOD now displays the *Lengths* tab. Although the building length parameters were being imported and saved correctly in the project database and being written correctly into the AERMOD input file, the interface was not displaying this tab.

Topic	Feature Description
Building Inputs	**Building Input Data in Meters or Feet** Building dimensions, base elevation, and tier heights can now be entered in the interface in either metric or English units. Please note that the building location along with the X and Y coordinates can only be entered in meters because of model restrictions.
Output Pathway	**Percentile Option Now Available for Any Source Group** The Percentile/Rolling Average option is now available for any source group. The Percentile option in previous versions of ISC-AERMOD View only supported Source Group ALL.

Topic	Feature Description
Output Pathway	**Re-Generate Percentile Contour Plot Files**
	This feature allows for the creation of percentile contour plot files without having to re-run the project. This feature will be particularly useful for users who want to create percentiles, but run the project through batcher and hence do not have percentiles created during the initial project run.
	IMPORTANT: Do not check the option to *Delete Temporary 1-Hour Binary POSTFILE* under the Percentile *Settings* panel. ISC-AERMOD View generates the percentile contour plot files by extracting information from the model-generated POSTFILES.

Topic	Feature Description

Terrain Processing	**AERMAP Version 04300**
	
	The latest release of the US EPA AERMAP Terrain Processor for AERMOD, version 04300, of December 22, 2005, now produces a series of output files in addition to the regular AERMAP summary file (*.ast), AERMAP Source (*.SOU) and AERMAP Receptor (*.ROU) output files. The list of files created by each AERMAP run is displayed below:
	
	   1) DOMDETAIL.OUT
	   2) MAPDETAIL.OUT
	   3) MAPPARAMS.OUT
	   4) RECDETAIL.OUT
	   5) RECELV.OUT
	   6) RECNDEM.OUT
	   7) SRCDETAIL.OUT
	   8) SRCNDEM.OUT

Terrain Processing	**Support for Project Datum** The option to specify the *Project Datum* is now available under the *Terrain Processor* dialog to support requirements of AERMAP version 04300 and the Lakes Environmental Terrain Processor. If project datum is not known, then AERMAP assumes that project datum is in NAD83 for 7.5 min DEMs or WGS84 for 1 deg DEMs.
Terrain Processing	**XYZ Digital Terrain File Types** Lakes Environmental Terrain Processor now accepts XYZ terrain files that are space, tab, or comma delimited.
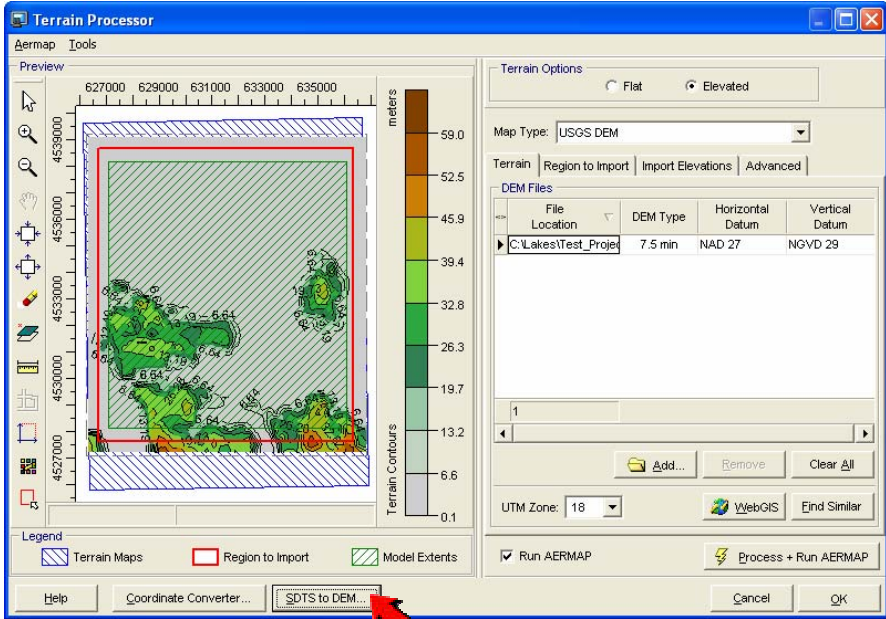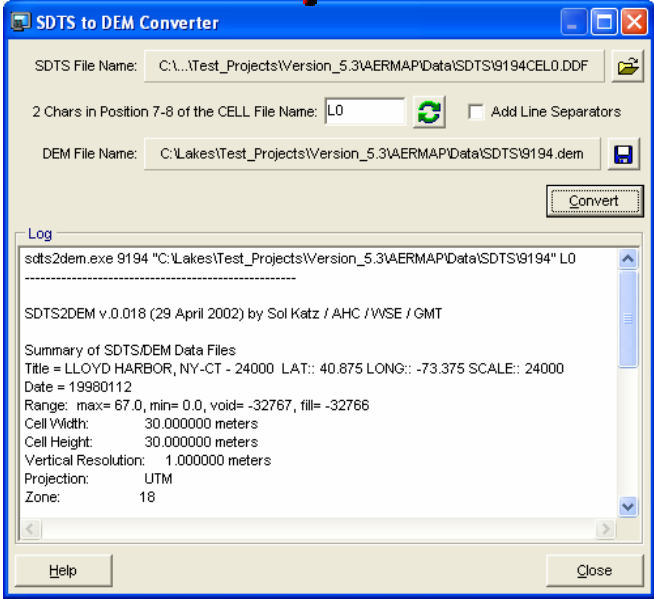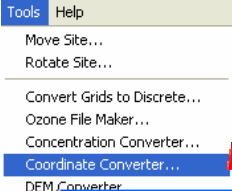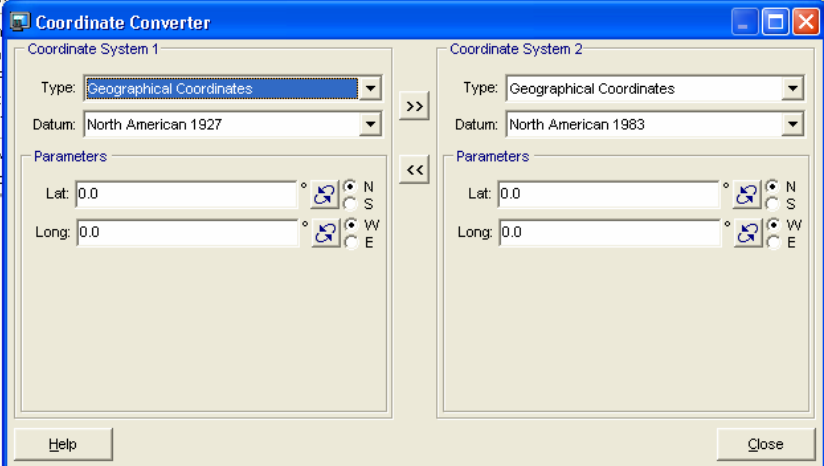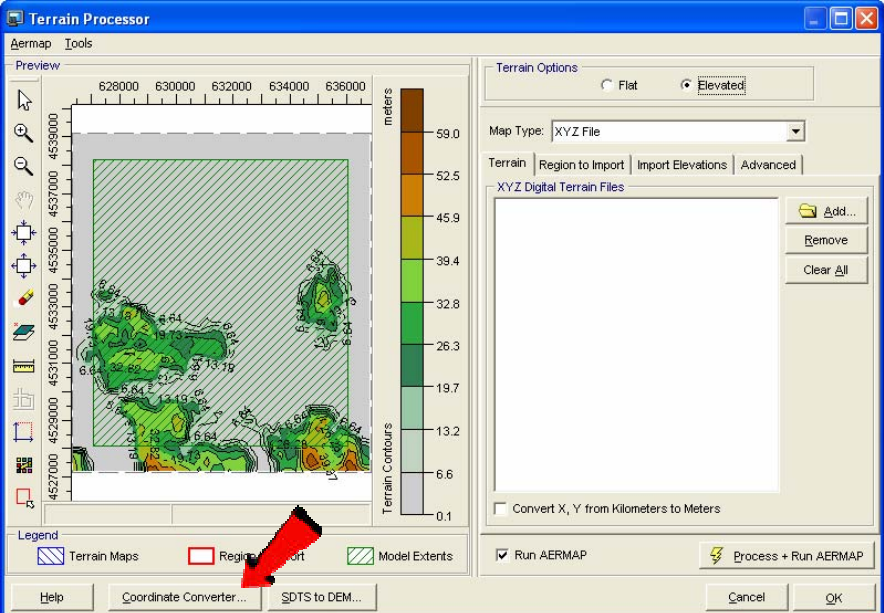
Topic	Feature Description
Terrain Processing	**Downloading Free DEM Terrain Files from WebGIS** A feature to automatically download free digital terrain files (DEMs) from www.webGIS.com was implemented under the *Terrain Processor* dialog. Currently, DEM files are only available for the United States in 7.5 min and 1 deg. Under the *Preferences* dialog (File | Preferences menu option) you will be able to setup the Map Cache Folder and specify a Proxy address if needed.
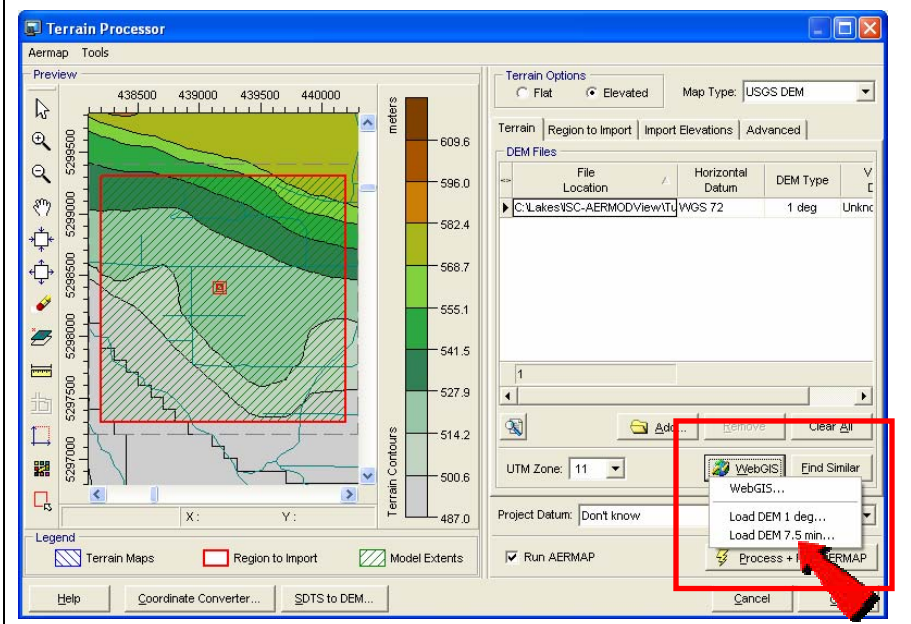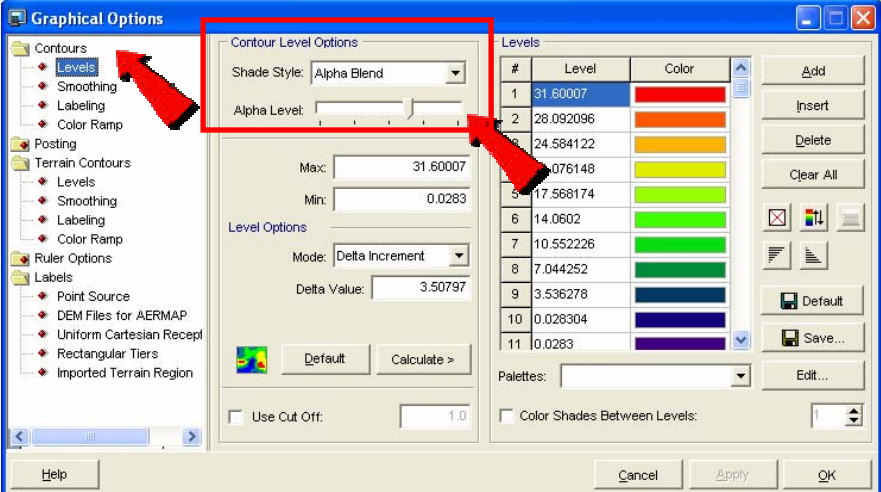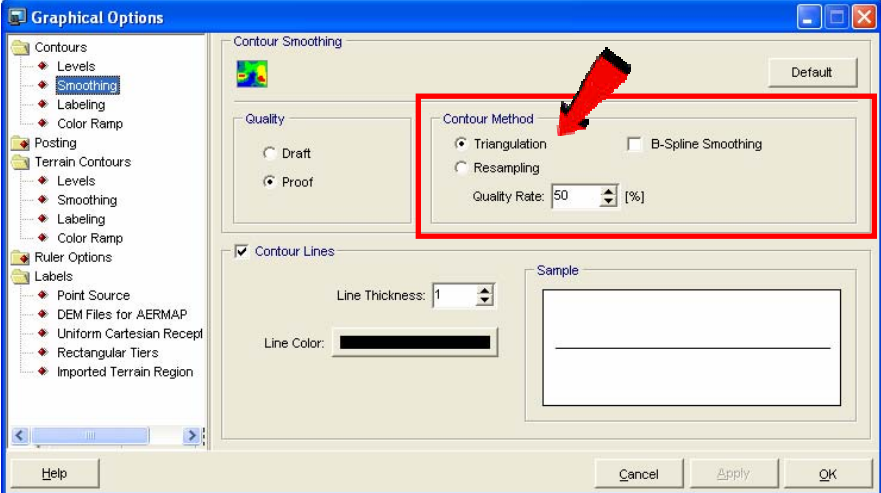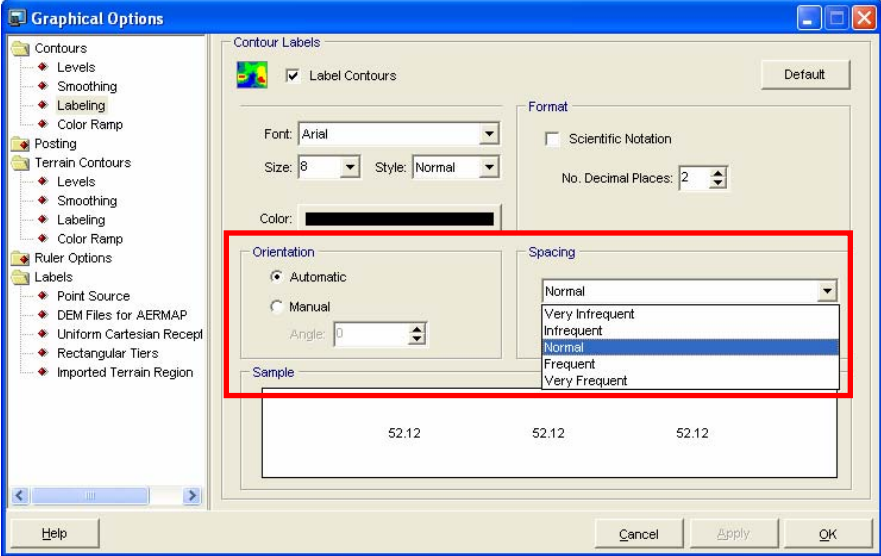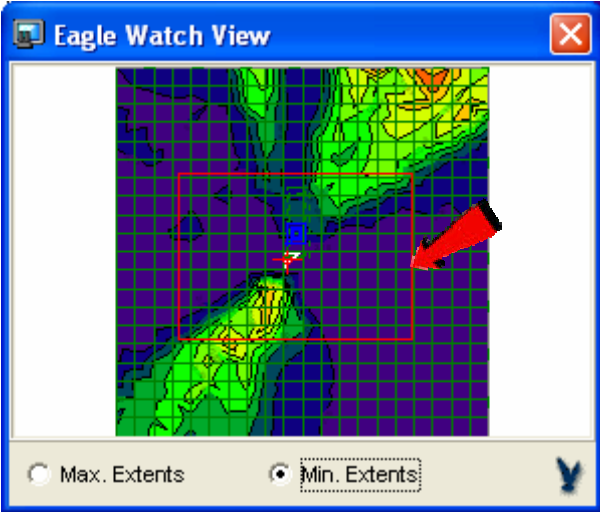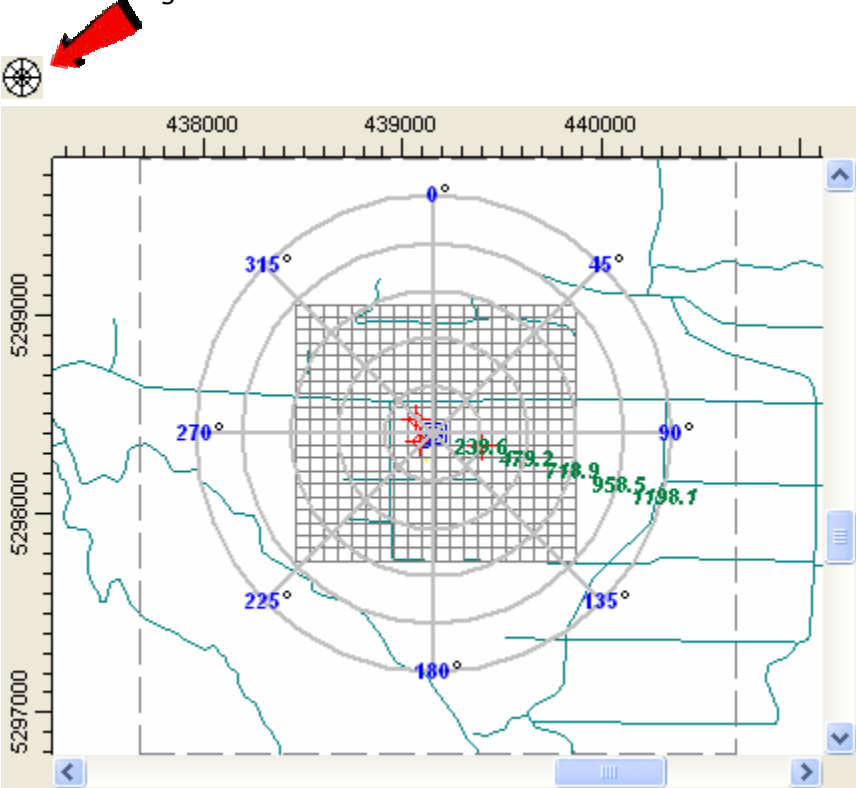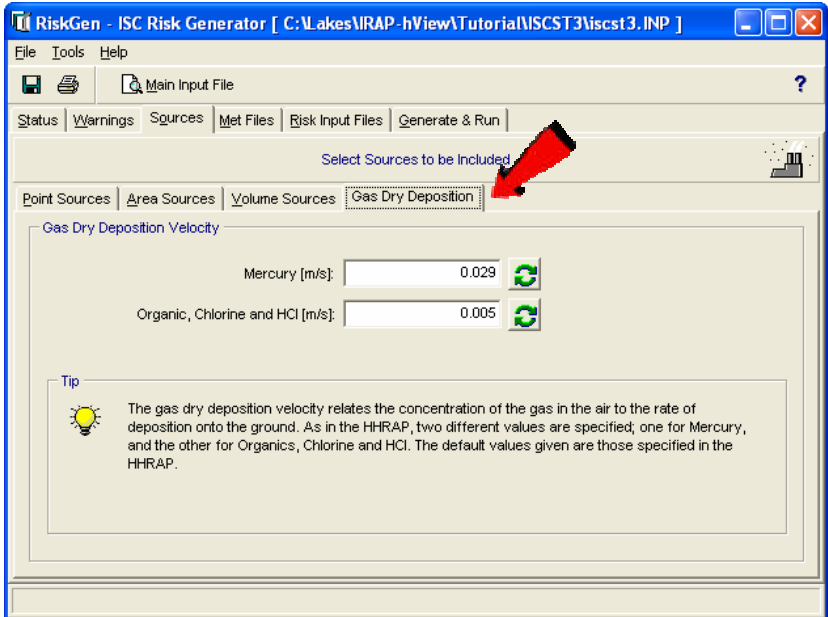
Topic	Feature Description
Terrain Processing	**SDTS to DEM Converter** The US EPA AERMAP does not read the new Spatial Data Transfer Standard (SDTS) formatted DEM data directly. Instead, the user is required to convert this format to the AERMAP-accepted DEM format. Lakes Environmental has implemented a user-friendly interface for the available SDTS2DEM.EXE program. The SDTS to DEM converter can be accessed from the *Terrain Processor* dialog by pressing the *SDTS to DEM* button.
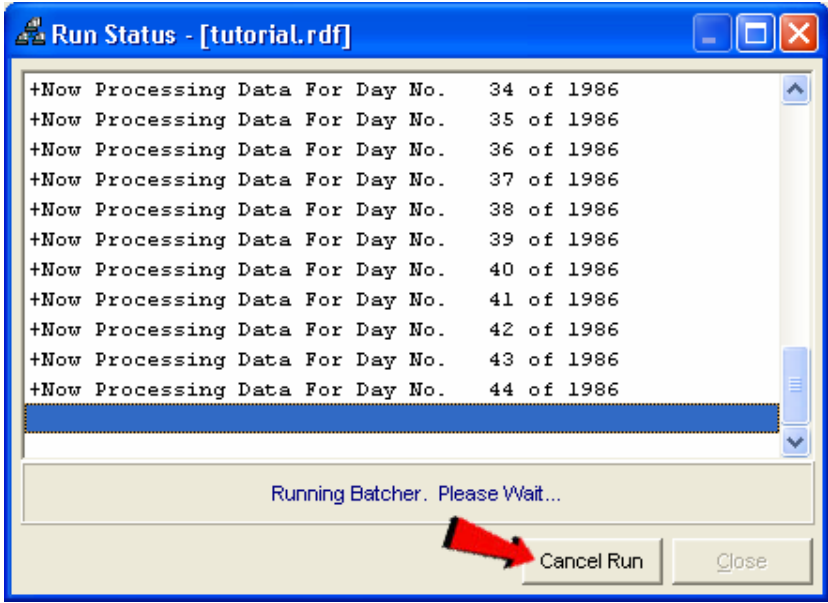
Topic	Feature Description
Tools	**Coordinate Converter Utility** The Coordinate Converter utility allows you to convert between geographic coordinates and projected Cartesian coordinates. You have access to this utility by selecting *Tools	Coordinate Converter...* from the menu or from the *Terrain Processor* dialog.
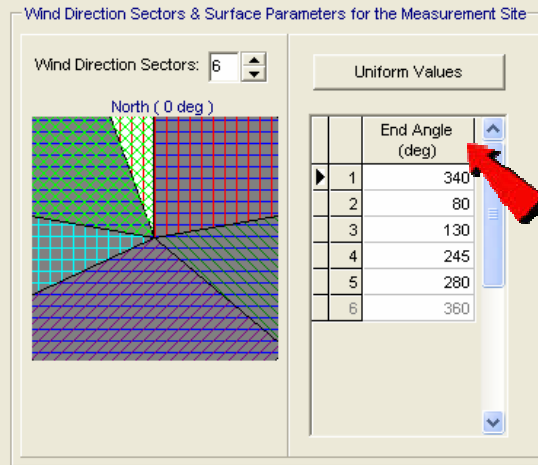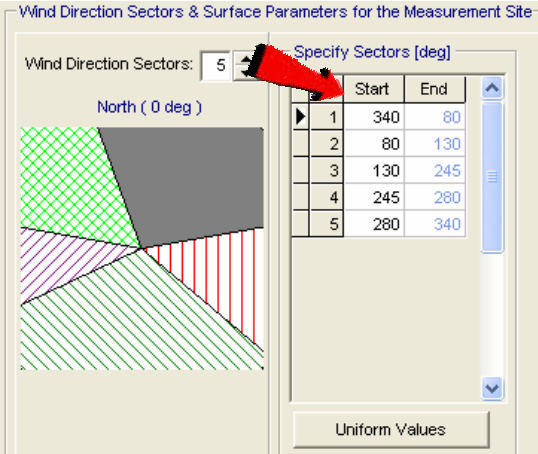
Topic	Feature Description
Graphical Options	**Transparency Option for Contours Using Alpha Blending** Alpha Blending has been implemented to support real transparency of your concentration or terrain contours. You can access this option from the *Graphical Options* dialog, *Levels* panel, *Shade Style* drop-down list box.
Graphical Options	**New Contour Method – Triangulation** A new contouring method, Triangulation, has been added to the Contour Smoothing options in the *Graphical Options* dialog. While the contours created by the *Triangulation* method may not be as smooth as those created by the *Resampling* method, they may be more representative in some cases.
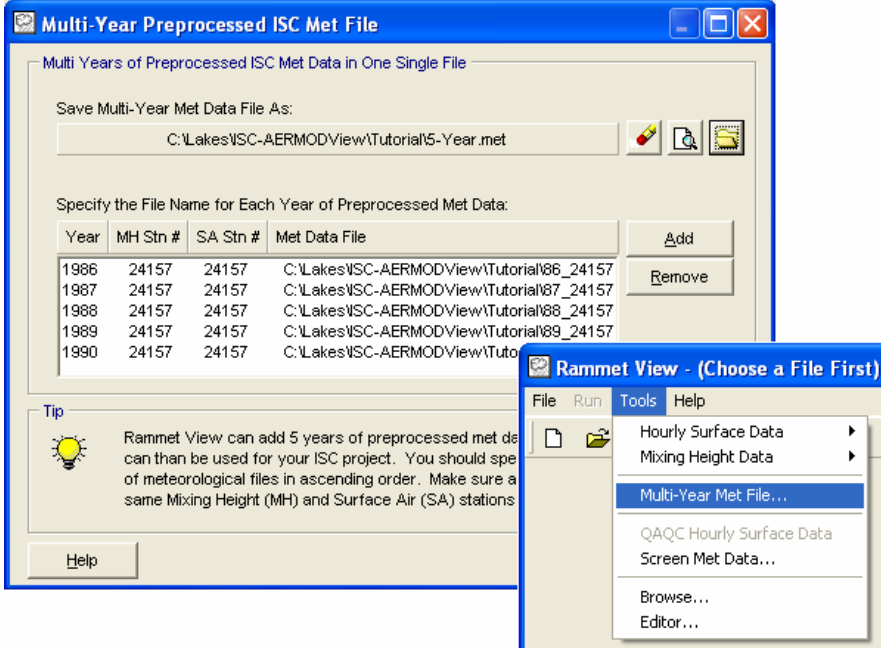
Topic	Feature Description
Graphical Options	**New Contour Label Options – Orientation and Spacing** Two new contour label options are available, *Orientation* and *Spacing*. You can now specify the orientation angle, as well as the spacing between labels, for contour labels. These options can be accessed from the *Graphical Options* dialog, *Labeling* panel for concentration or terrain contours.
Graphical Tool	**New Eagle Watch View Tool** The Eagle Watch View tool displays a small window showing the full extents of your modeling domain with a red rectangle marking the area that is currently displayed in the main graphical area. In the Eagle Watch View window, you can use the mouse pointer to draw a new rectangle around the area that you would like to zoom in on. This will automatically updates the display in the main window to the area marked inside the Eagle Watch View window.

Topic	Feature Description
Graphical Tool	**New Web Annotation Tool** The Web Annotation tool allows you to draw a polar grid with the option to specify rings, rays, and labels at specific distances for annotation purposes only. This annotation tool can be especially useful when used as a scaling tool for graphical visualization of the modeling area and its dimensions.

Topic	Feature Description
Graphical Tool	**Uniform Polar Grid with 360 Radials Every 1 deg - Bug Fix** The problem occurring in version 5.1, when a uniform polar grid with 360 radials spaced every degree was specified, and its graphical representation on the graphical area was not being displayed, has been resolved.
Graphical Tool	**Moving Multi-Tier Buildings – Bug Fix** In version 5.1, a problem occurred when all of the tiers of a multi-tier building were being graphically selected and moved to a new location. In such cases, only the base tier was being moved correctly. This bug has been fixed in version 5.3.
3D View	**Correct Display for Rotated Area Sources – Bug Fix** A bug has been corrected that was causing area sources with an orientation from north other than zero to be displayed incorrectly in 3D View.
RiskGen	**Updated RiskGen Options** The RiskGen Utility for the ISCST3 and ISC-PRIME models has been updated to process air modeling data in accordance with the 2005 Final US EPA-OSW Human Health Risk Assessment Protocol (HHRAP) (EPA530-R-05-006). This includes the addition of a separate Mercury vapor phase run, as well as fields to specify gas dry deposition velocities for Mercury and non-Mercury vapour phase runs.

Topic	Feature Description

Multi-Chemical Run Utility	**Emission Output Unit**
	
	The user-defined emission output unit that is specified under the Source Pathway is now written to the input file for Multi-Chemical runs. This custom emission output unit was previously commented out in the input file being created by the Multi-Chemical Run utility and the model was calculating the concentration/deposition results in the default units of:
	
	`CONCUNIT ug/m^3`
	`DEPUNIT g/m^2`

Batcher	**Cancel Run Option in Batcher** AERMOD and ISC-PRIME model runs through Batcher can now be aborted. This is particularly useful when a multi-chemical run needs to be stopped before it is completed. The Cancel Run button will be automatically disabled if the interface detects that the US EPA model executable currently being used does not support this cancel feature. The US EPA ISCST3 model executable (ISCST3.EXE dated 02035) was compiled with a 16-bit compiler and does not support this feature.

Topic	Feature Description
Aermet View	**Start and End Angles for Sectors in Aermet View** Up to Aermet View Version 5.1, the wind direction sectors were specified in the interface by giving the End angle. This approach had a limitation that the first sector always had to start at 0 degrees (North). In Version 5.3 instead of the End angle, the user is now requested to specify the Start angle and the End angle is automatically calculated. This allows for greater flexibility. **Old Way:** **New Way:** **Warning:** Once your Aermet View projects created in Version 5.1 and below are opened using Version 5.3, the project database is updated to the new sector angle schema. This means that any project created and opened in Version 5.3 and above will not be compatible with older versions of Aermet View (Version 5.1 and below).

Topic	Feature Description
Rammet View	**Multi-Year Met File Utility** This utility is now being incorporated again under the *Tools* menu for Rammet View. This utility combines single year pre-processed ISC met data files into a combined multi-year met data file.
WRPLOT View	**Calm Hours with TD-3505 Surface Data** In the TD-3505 format, calm hours are indicated in column 65 with the letter "C". WRPLOT now registers these hours as calms, instead of indicating them to be missing.
Percent View	**Percentile Option Available for Any Source Group** Now Percent View accepts POSTFILES for source group other than Source Group ALL. When asked to specify the PLOTFILE, make sure to specify the 1-Hour PLOTFILE for the same Source Group and for the same project. This way, Percentile Plotfiles can be created with the proper receptor locations and Source Group references.