# BREEZE AERMOD/ISC

## Continuous Release

AERMOD is a steady-state Gaussian dispersion model that represents the current state-of-the-science and preferred dispersion model of the U.S. EPA (U.S. Environmental Protection Agency). The AERMOD system includes:

- An advanced meteorological preprocessor to compute site-specific planetary boundary layer (PBL) parameters
- Enhanced treatment of plume rise and plume penetration of elevated inversions
- Improved computation of vertical profiles of wind, turbulence, and temperature

There are two input data processors that are regulatory components of U.S. EPA's AERMOD:

- **AERMAP** - the terrain data preprocessor
- **AERMET** - the meteorological data preprocessor

BREEZE AERMOD is an enhanced version of the U.S. EPA-approved AERMOD that provides modelers with the tools and functionality required to perform air quality analyses that help to address both permitting, regulatory, and nuisance issues as well as perform academic research. In addition to including all of the standard U.S. U.S. EPA source types and features, BREEZE AERMOD includes exclusive BREEZE features such as a flare source type and the ability to model multiple pollutants at the same time. BREEZE also provides assistance when users are choosing among model options and executable versions. Once the model run has been set up, users can choose from the latest regulatory version of AERMOD or older versions of the model for analyses.

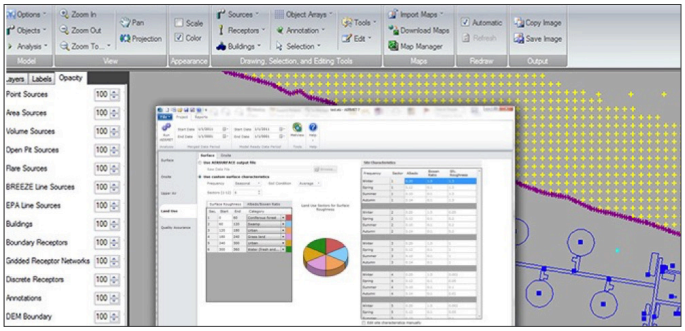
BREEZE AERMOD is available in two editions: Pro and Pro Plus. BREEZE AERMOD Pro Plus includes all of the features of the Pro edition, as well as additional features such as the ability to create animations, export results as shapefiles, and use additional source contribution analysis tools.

BREEZE AERMOD offers the most complete air quality modeling system available on the market today. No other application is used by more air quality professionals around the world!

## Robust Tools and Features

### Familiar User-Interface with Intuitive Process Flow

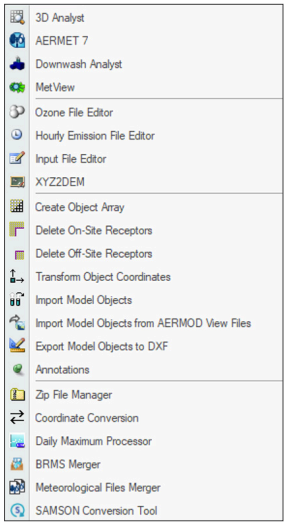
The intuitive and user-friendly interface of BREEZE AERMOD is designed similar to Microsoft® software interfaces. As a result, BREEZE AERMOD seamlessly guides users through setting up their modeling scenarios in a quick and efficient manner, saving users time and money.



*BREEZE AERMOD enhances the basic U.S. EPA programs providing modelers with more functionality and tools for analyzing results.*

### Model Setup Tools

BREEZE AERMOD provides a variety of tools that expedite the model run set-up, facilitate file management, and improve results display and analysis. These include a(n):




- **Data Tab** that provides a means of viewing project data in a spreadsheet view, allowing users to copy and paste directly from Excel, sort data, change model IDs, and filter objects by data types
- **Map tab** which allows import of DXF files, shapefiles, or base map images as well as visualization and graphical editing of model objects
- **Download Base Maps tool** to automatically download a high-resolution base map for any location around the world based on the site coordinates
- **Coordinate Converter** to convert model coordinates between hundreds of coordinate systems
- **SAMSON Conversion tool** that enables users to convert surface meteorological data to a SAMSON file format, which can then be used to process AERMOD-ready meteorological data using AERMET

Trinity Consultants

breeze

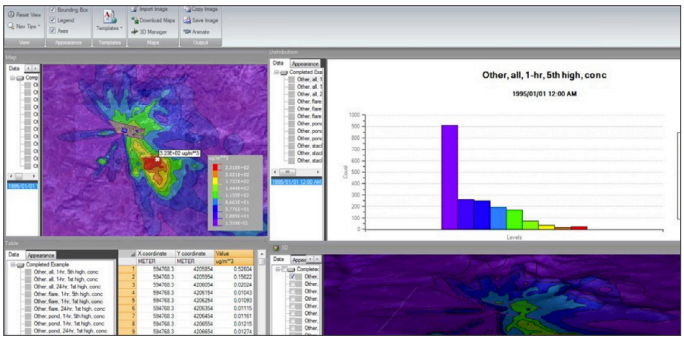
- **Hourly Emission File Editor** to create, view, and edit hourly emission rate files for modeled sources
- **Import tool** to import model objects from existing scenarios
- **Delete On-Site or Off-Site Receptors tool** to remove receptors in batches for faster model setup
- **Variable Density Grid, Polygon Grid, and other drawing tools** to quickly create receptor grids and other model objects
- **U.S. EPA BPIP Prime program** integration to automatically process building information
- **Source grouping tools** to quickly assign source groups
- **And more!**

## Quickly Extract and Summarize Results

BREEZE AERMOD provides a number of results options in the Reports Tab to facilitate both analysis and documentation. Standard HTML reports within BREEZE AERMOD provide information on model options, sources, model results, maximum concentrations, and error and warning messages. Customized reports are also available.

## Advanced Post-Processing Options and Graphical Results

BREEZE AERMOD provides extensive graphical and tabular results options using the post-processor program, BREEZE 3D Analyst. BREEZE 3D Analyst is a powerful post-processor that enables you to analyze and visualize data and results in time series, 2D and 3D contour plots, and 3D isosurface and plane views, and to accomplish post-processing tasks such as adding/subtracting the results of two model runs or adding background concentrations. Users can export results to Google Earth™ and Golden Software's Surfer®, and animated movies can be created using the Pro Plus edition for display in presentations.

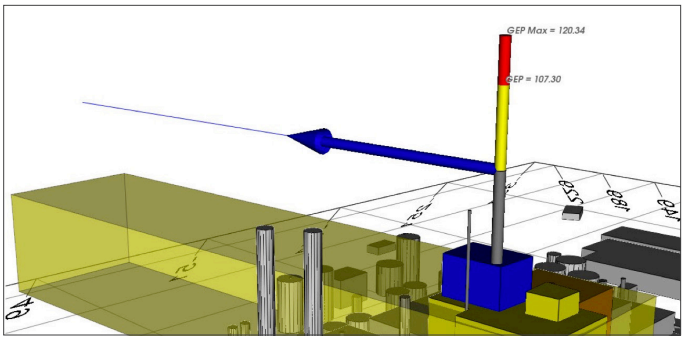



*Better understand your results with 3D Analyst's many visualization options.*

## Data Analysis Tools

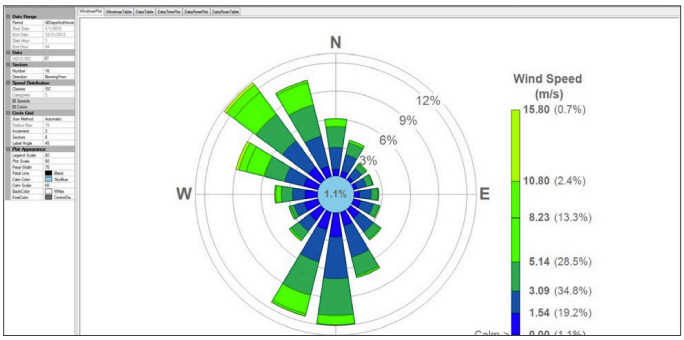
BREEZE Downwash Analyst simplifies the process of interpreting building downwash data in BREEZE AERMOD. This data analysis tool (available as a separate BREEZE application) takes the cryptic numerical results of AERMOD's BPIP building pre-processor and displays them visually, clearly showing the effects of buildings on AERMOD results. BREEZE Downwash Analyst is a great companion program for BREEZE AERMOD and is available for purchase separately.

BREEZE MetView is a powerful data analysis tool that is used to display and analyze meteorological data in both tabular and graphical




*Understand visually the effects of building downwash with BREEZE Downwash Analyst.*

formats. MetView can be used to create wind roses for user-defined periods, data roses, pollution roses, and more. The basic version of BREEZE MetView is included with the purchase of BREEZE AERMOD, and the full version is available for purchase separately.




*MetView, a powerful data analysis tool, is capable of displaying a wide range of meteorological data formats.*

## High-Speed AERMOD Modeling Solutions

Due to advances in scientific knowledge, higher resolution raw data, stringent air quality standards, and changing regulations, environmental modeling is demanding more and more from EHS professionals and their computers. All of these influences can cause AERMOD model runs to take significant amounts of time. Instead of minutes, AERMOD runtimes for large projects can take days or even weeks on a single-core computer. To address the issue of increased runtimes, we offer a couple of options to modelers to increase productivity while managing model complexity. The options available for BREEZE AERMOD users interested in parallel processing include local and remote resources. (Note: A two-core local parallel processing version is included in BREEZE AERMOD.)

- **Cluster Computing:** BREEZE Remote Modeling System (Remote Resources)
- **Standard Computing:** BREEZE AERMOD Parallel (Local Resources)

Visit trinityconsultants.com/software/dispersion/AERMOD to learn more about BREEZE AERMOD.



**trinityconsultants.com/software**
P +1 972.661.8881 / F +1 972.385.9203
breeze@trinityconsultants.com