CALPUFF View

Long Range Transport Air Dispersion Model

The First Complete Graphical Pre & Post-Processor for CALPUFF/CALMET!

CALPUFF View is a PRE and POST Processor for CALPUFF. This is a Puff model that has a series of advantages over Plume models. Puff models can consider non-steady-state emissions and are used in a wide variety of air quality studies.

The CALPUFF modeling system has 3 main components:

- **CALMET** (a diagnostic 3-D meteorological model),
- **CALPUFF** (the transport and dispersion model), and
- **CALPOST** (a postprocessing package).

This system is a comprehensive modeling tool that includes meteorological and geophysical data processors, a meteorological model, a puff-based dispersion model, and post-processing modules.

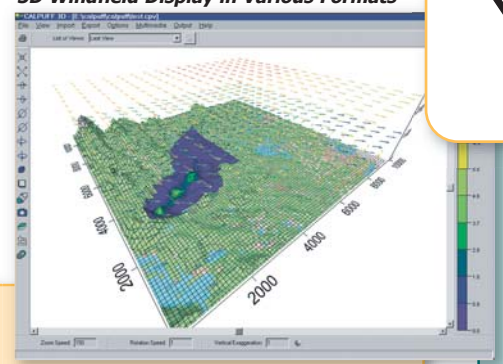
CALPUFF is already in use to model numerous air quality scenarios, including:

- Toxic pollutant deposition,
- Near-field impacts from
  - point
  - line
  - area
  - volume sources
- Forest fire impacts,
- Visibility assessments,
- Long range transport studies.

CALPUFF View Features

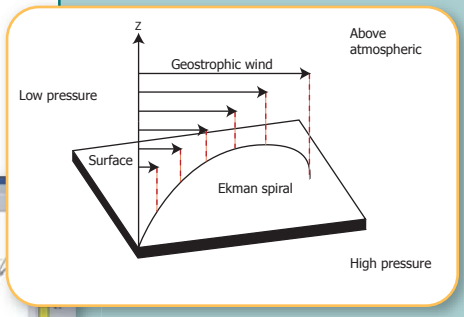
- Complete pre and post processor interface for CALPUFF & CALMET.
- Up to 100 times easier to use than plain CALPUFF & CALMET.
- Transparently integrates all geophysical data (terrain, land use, meteorology).
- Automatically downloads maps and terrain data from the Web.
- Outstanding post-processors: such as 3D-wind fields, contour plots, XY graphics, and puff representations.
- See terrain and results in photo-realistic and animated tools (zoom, rotate, print).
- Reads output files from CALMET, CALPUFF, and CALGRID.

3D Windfield Display in Various Formats



Advantages:

- Complex Terrain
- Stagnation, inversion, recirculation, and fumigation conditions.
- Overwater transport
- Coastal conditions
- US EPA recommended model for Long Range Transport.
- Near-fields impacts
- Visibility assessments
- Class I area impact studies
- Criteria pollutants modeling
- State Implementation Plan (SIP) applications.
- Secondary pollutant formation and particulate matter modeling.
- Buoyant area and line sources.



Two Package Options are Available:

- *CALPUFF View Post-Processor Only*
- *Complete CALPUFF View Package (Pre & Post-Processor)*

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Lakes™ Environmental

CALPUFF View

The Preferred Long Range Transport Model

Features

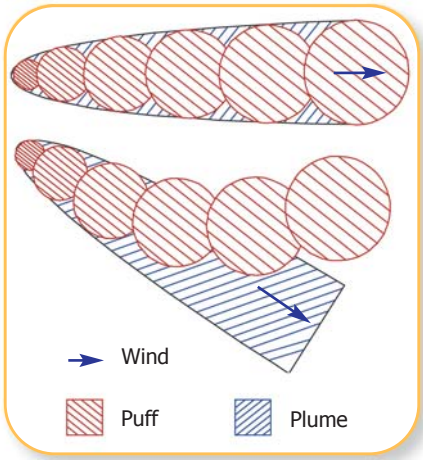
- Point, area, volume, and line sources.
- Non-steady-state emissions and meteorological conditions.
- Calm wind algorithm.
- Causality effects.
- Efficient sampling functions.
- Dispersion coefficient options.
- Boundary layer turbulence.
- Vertical wind shear.
- Plume rise.
- Building downwash
- Subgrid scale complex terrain (CTDM)
- Dry Deposition
- Overwater and coastal interaction effects.
- Chemical transformation options
- Wet removal
- Visibility
- Graphical User Interfaces
- Buoyant area source algorithm
- Buoyant line source capability
- Wind shear effects - Puff splitting
- ISC input conversion program
- BPIP interface
- Split sigmas
- Output data compression
- Recent Developments - CALMET
- MM4/MM5 interface
- Use of satellite cloud data
- Similarity theory options
- Map factors
- Interpolation of precipitation data
- Slope flow improvements
- Terrain angle, orientation and shadowing effects.

Contact Us Today!

A preliminary consideration on advantages of a puff model, such as CALPUFF, over plume models such as ISCST3 should be based on the following modeling requirements:

- Whether the straight-line steady-state assumptions on which a plume model is based are valid.
- Transport distances.
- Potential for temporally and/or spatially varying flow fields due to influences of complex terrain.
- Non-uniform land use patterns.
- Coastal effects.
- Calm winds and stagnation conditions.
- Variable wind directions.

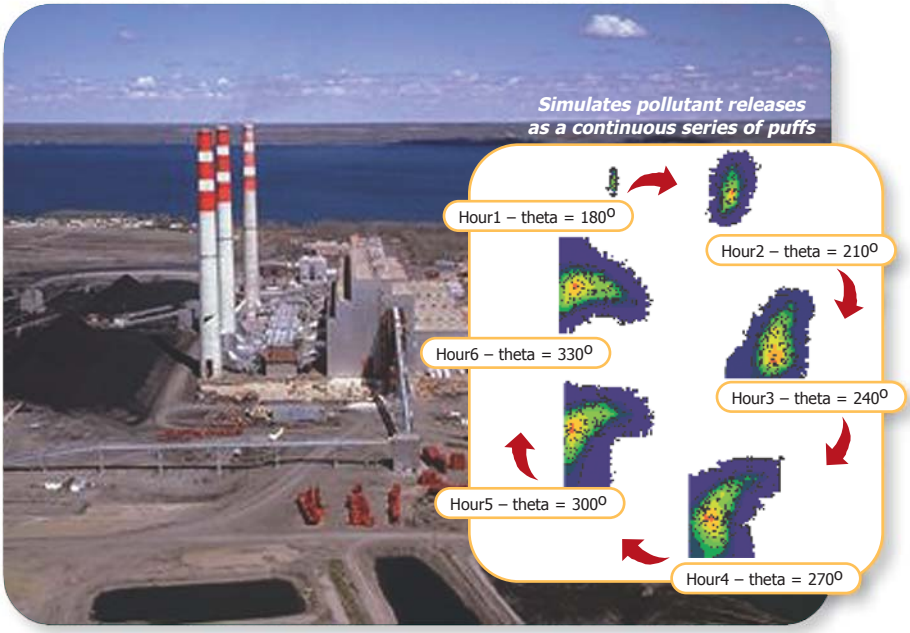
For cases involving a high degree of spatial variability of the flow within the boundary layer, such as upslope or downslope flows or flows along a winding river valley, the straightline, steady state assumption may not be valid beyond even a few kilometers, and a puff model may be more appropriate.



Puff models have a more realistic presentation of dispersion than plume models

Each of these programs has a graphical user interface (GUI). In addition to these components, there are several other processors that may be used to prepare:

- Geophysical (land use and terrain) data in many standard formats,
- Meteorological data (surface, upper air, precipitation, and buoy data), and
- Interfaces to other models, like Penn State/NCAR Mesoscale Model (MM5).



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