

# *AERSURFACE*

EPA Regional/State/Local  
Dispersion Modeling  
Workshop: May 16-18, 2006

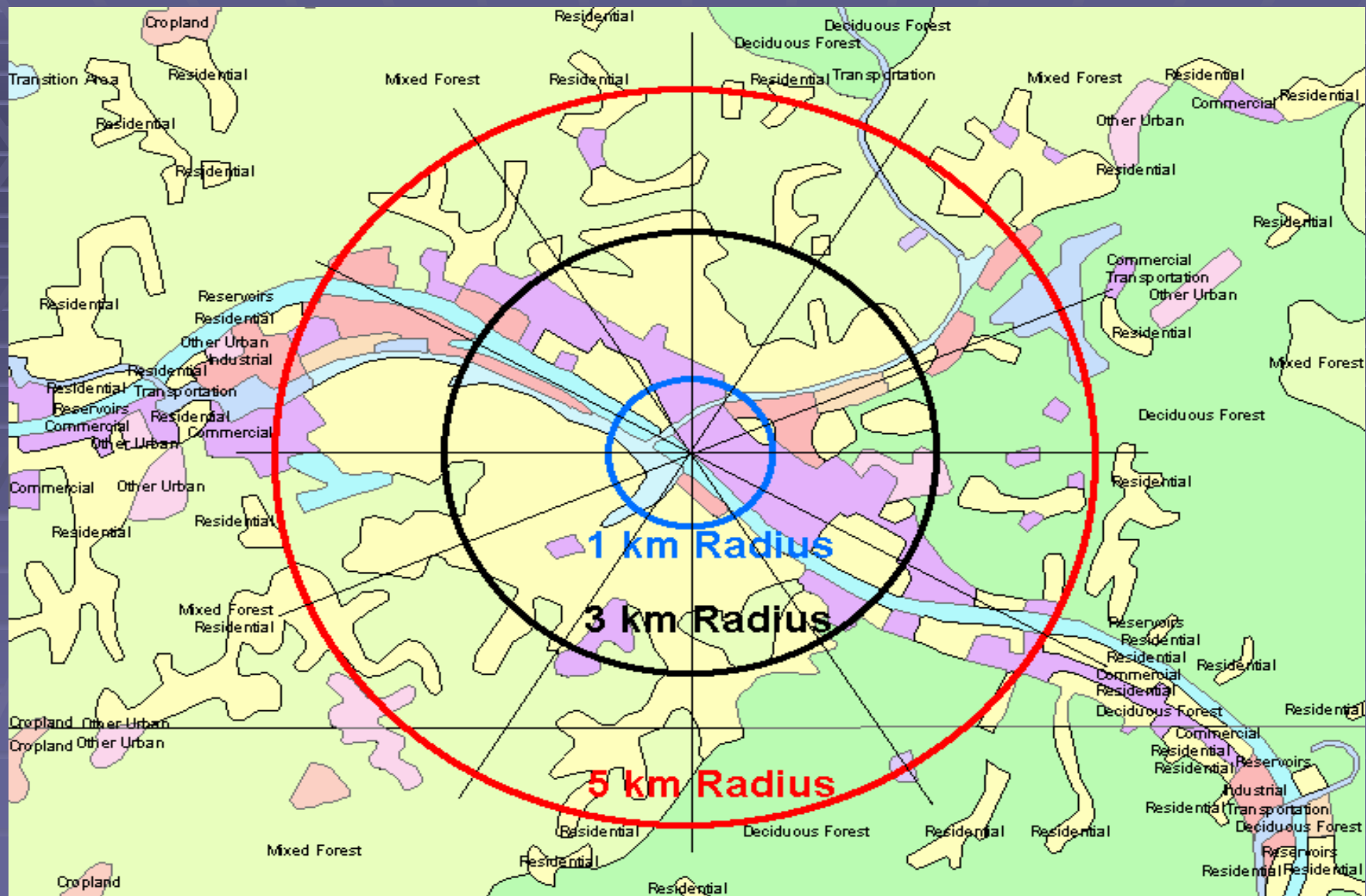


# What is it?

- A tool that produces surface characteristics data (albedo, Bowen ratio & surface roughness) for use in AERMET/AERMOD
- Currently under development through WA with MACTEC
- Building off the design of the WVa DEQ (Chris Arrington) version of AERSURFACE

# General Overview

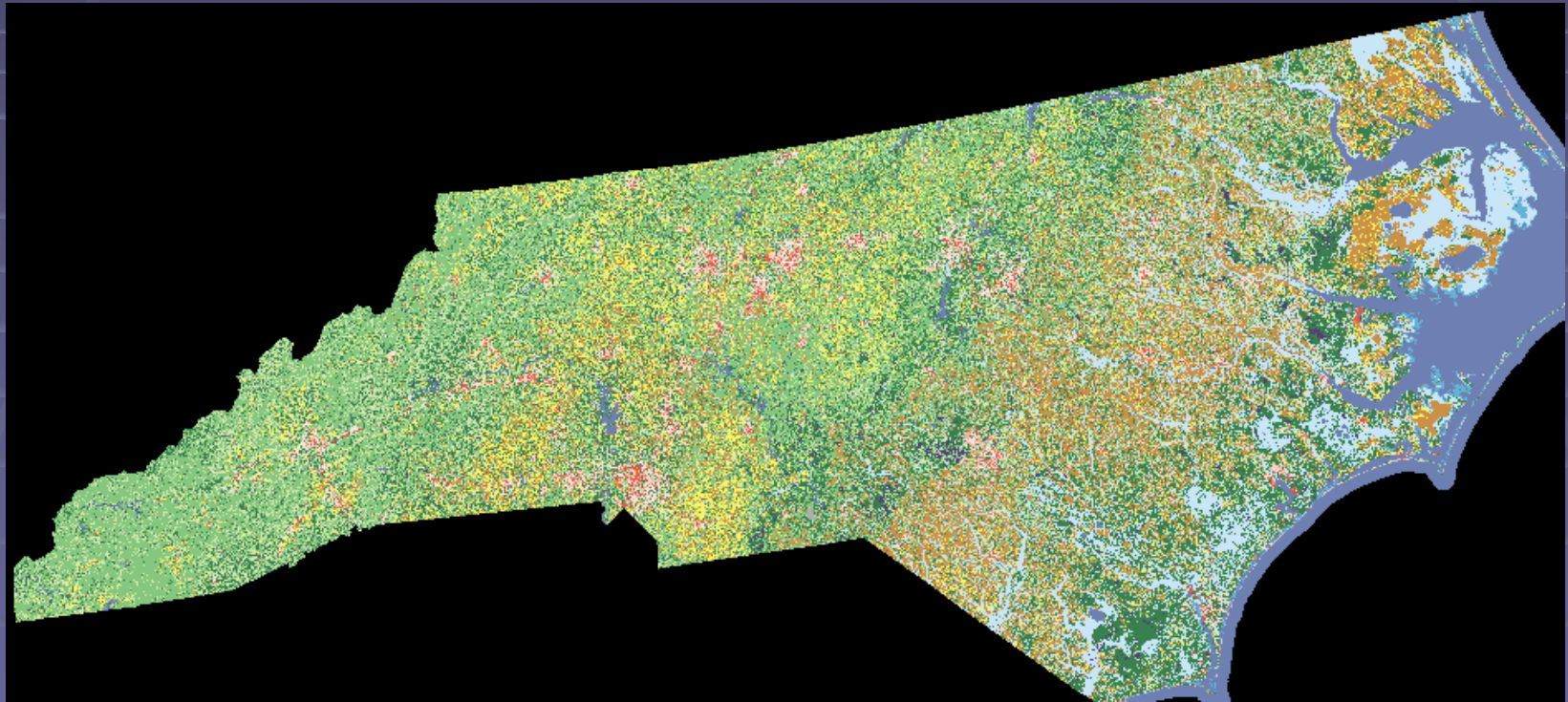
- Input land-use data
- Specify location and radius of study area
- Specify number and width of sectors, if any
- Translates land-use category to surface characteristics values
- Outputs albedo, Bowen ratio, and surface roughness formatted for input into Stage 3 of AERMET



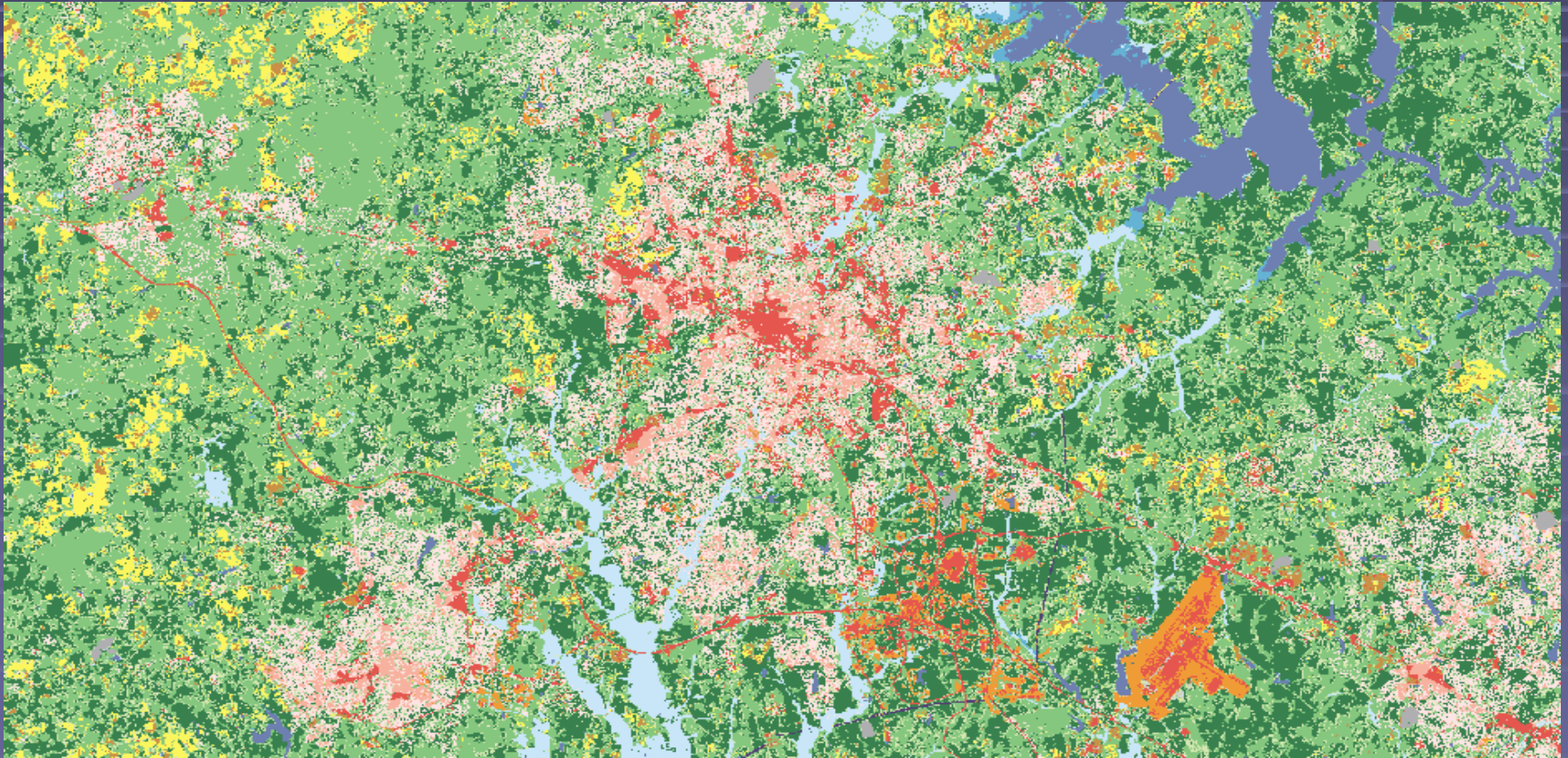
# USGS NLCD 92

- USGS National Land Cover Database  
1991-1992
  - 30 m resolution
  - 21-category land use
  - For the continental US

# USGS NLCD 92: Example data



# USGS NLCD 92: Example data



# Surface Characteristics

- NLCD 92 provides 21-category land-use
- Want monthly, seasonal, and annual surface characteristics values
- Look-up table to translate from 21 land-use categories into monthly, seasonal, and annual albedo, Bowen ratio, and surface roughness values
- Interested in getting volunteers to review look-up table

# Current Plans

- Currently working on coding of tool
- Receive comments from review of surface characteristics values table
- Documentation and testing
- Hoping to have the tool available for internal (alpha) testing and comments
- Beta version released to public