AERSURFACE
Breakout Session Summary

EPA RSL Workshop

U.S. EPA / OAQPS / Air Quality Modeling Group

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AERSURFACE Breakout Summary

- **Purpose of Breakout Session:** Have an open discussion among co-regulators, to share information related to specific challenges and needs associated with respect to the application of the more recent version of AERSURFACE v.20060.
- **Questions to jumpstart discussion:**
  - When dividing a site into individual wind sectors, do you typically use the default 30-degree sectors or try to refine the sectors by changes in land cover?
  - For user-defined sectors, do you try to keep sectors as small as possible (close to 30 degrees) or much larger sectors if the land cover is more homogeneous?
  - What are the greatest challenges when using AERSURFACE (i.e., sector definitions – start/end, airport/non-airport designation, surface moisture designation, continuous snow cover)?
  - How is AERSURFACE being used to determine urban/rural characterization (what land cover categories are being used for urban classification)?
  - What additional guidance is needed on the use of AERSURFACE by the modeling community?

But first a presentation by Alan Welch and Rebecca McLean-Rudolf of the Connecticut Dept. of Energy & Environmental Dept.

AERSURFACE Breakout Summary

Presentation by Alan Welch and Rebecca McLean-Rudolf (CT DEEP) - Making AERSURFACE "Hit the Mark"

Guidance Needs

- Airport/non-airport designation.
- Updated list of accurate NWS/FAA met station locations – some stations are 100's of meters from the published coordinates
  - NOAA has a way to pinpoint tower and can provide accurate coordinates.
  - NOAA plans to try to publish accurate coordinates
  - Users can call NWS rather than airport to get accurate locations
- Determining urban/rural designation

Sector Definitions

- May be important in many cases to use user-defined sectors rather than standard 30-degree sectors starting at 0-degrees
- Important to pay attention to size of sectors when using user-defined sectors – keep sectors as small as possible

NLCD Accuracy

- USGS says that 1992 data are less than 50% accurate so there is a likelihood the data are incorrect
- More recent NLCD has around a 90% accuracy