

# Landscape Characterization

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**Attendees:** EPA: Drew Pilant, Ross Lunetta, Jason Ching, Rosalina Rodriguez, Nancy Mayer, John James; NASA/GSFC: Yihua Wu; USRA/MSFC: Bill Crosson; GA EPD: Maudood Khan; EC/R Inc.: Becky Battye

- Develop a national data base of building data and associated parameters to complement traditional fine-scale LULC data for use in high-resolution Urban Canopy Parameterization and mesoscale meteorological models. NASA, EPA. Why: to provide better estimates of urban-scale air quality, pollutant transport and surface energy balance for potential applications in DHS.
- Evaluate the feasibility of meteorological and air quality modeling at 1 km resolution. NASA, NOAA, EPA. Why: Higher resolution air quality information may be useful for public health decision making.
- Develop a baseline of urban landscape parameters such as albedo and thermal emissivity at ~ 10 m resolution in selected non-attainment areas. EPA, NASA. Why: facilitate evaluation of urban heat island mitigation efforts.
- Evaluate need for national LULC projection data set and define methodology for product development. NASA, EPA. Why: provide resource for science community to evaluate effects of urbanization and improve model inputs.
- Explore means for using high-resolution hyperspectral remote sensing data for vegetation species differentiation. NASA, USFS, EPA. Why: to improve biogenic emissions and deposition models.

# **Landscape/Transport Joint Session**

- Integrate aerosol optical depth and land use information to support air quality monitor site planning and designation of non-attainment areas. EPA. Why: to improve monitor siting and attainment evaluation.
- Develop better data sets for tree and crop species identification. NASA, EPA. Why: to improve deposition rates in transport models.

## **Food for thought**

- Are there needed improvements in LULC data to better predict long-range dust transport events?