

## LandScan USA: High-Resolution Population Distribution Model

Using an innovative approach with Geographic Information System and Remote Sensing, ORNL's LandScan global population project has developed a population distribution model that produces the finest resolution population distribution data available for the entire world and the Continental US. LandScan global at 1 km resolution represents an "ambient population" (average over 24 hours) and is 2400 times more spatially refined than the previous standard. As an expansion to global LandScan, ORNL is currently developing a very high-resolution (90m cell) population distribution data (LandScan USA) for the US. LandScan USA includes nighttime (residential) as well as daytime population distributions. LandScan USA is more spatially refined than the resolution of block-level census data and includes demographic attributes (age, sex, race). The potential benefit of LandScan USA has been demonstrated for 29 counties covering coastal Texas and Louisiana including the Houston metropolitan area. Locating daytime populations requires not only census data, but also other socio-economic data including places of work, journey to work, and other mobility factors. The combination of both residential and daytime populations will provide significant enhancements to geospatial applications ranging from homeland security to socio-environmental studies.

### LandScan USA Characteristics:

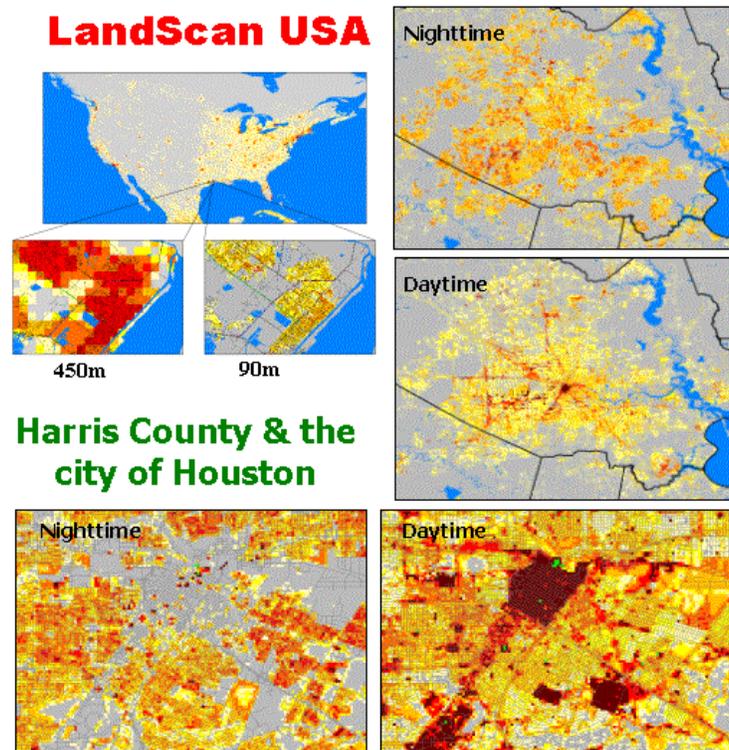
- High resolution (90m or 3 arc second)
- Nighttime and daytime distributions
- Based on 2000 Census
- Finer than most Census blocks
- Includes demographic attributes
- Available in GIS format

### Homeland Security Applications:

- Emergency planning and management
- Rapid risk assessment
- Evacuation planning
- Consequence assessment
- Mitigation Planning and implementation

### Current Sponsors:

- USEPA ORD (National Center for Environmental Assessment)
- Defense Threat Reduction Agency
- National Cancer Institute



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