

# Land Use and Land Cover Digital Data

Computer tapes derived from land use and land cover (LULC) data and associated maps at scales of 1:250,000 and 1:100,000 are available from the U.S. Geological Survey.

This data can be used alone or combined with a base map or other supplemental data for a variety of applications, using commercially available software. You can produce area summary statistics, select specific portions of a map to study or display single classifications, such as bodies of water.

LULC and associated digital data offer convenient, accurate, flexible, and cost-effective access to users who are involved in environmental studies, land use planning, land management, or resource planning.

## Applications

Coordinates for this data are in a local (to the map) Universal Transverse Mercator (UTM) system. The file contains control points with latitude and longitude and x and y values, allowing conversion, with the appropriate software, to the standard UTM or another coordinate system. The data can also be transformed to other map projections by converting to geographic coordinates and relating the coordinates to a specific projection. This is particularly useful if your supplemental base map exists in a projection different from the local UTM.

## Categories of Data

The six categories of data are: (1) LULC, (2) political units, (3) hydrologic units, (4) census county subdivisions, (5) Federal land ownership, and (6) State land ownership.

Data from categories 1 through 4 are available for the conterminous 48 States and Hawaii, with the exception of Nevada (categories 1 through 3 only).

Seven States have data in category 5 and six States have data in categories 5 and 6.

The LULC category has nine classes of data: urban or built-up land, agricultural land, rangeland, forest land, water, wetland, barren land, tundra, and perennial snow or ice. These classes are subdivided by type; for example, forest lands are shown as deciduous, evergreen, or mixed and water is shown as streams and canals, lakes, reservoirs, or bays and estuaries.

## Format Availability

The LULC and associated maps used to produce the computer tapes are polygon, or areal, maps. This means that areas with consistent LULC characteristics are compiled on the map as a series of polygons delimited by lines. Each polygon is identified with a unique attribute code that describes the area. When the map information is digitized, it is processed through the Geographic Information Retrieval and Analysis System (GIRAS). There are two ASCII character formats available—vector polygon and composite theme grid cell.

### Vector Polygon Format

In the vector polygon format, all topological elements of the polygon map are represented as points, lines, or areas. With the appropriate software, the data can be plotted to replicate a graphic map.

This format is useful for readily locating areas with similar characteristics, for plotting maps, and for area analysis, such as determining the amount of a lakeshore occupied by an industrial site.

When you purchase this format there are up to six files—one for each of the categories of data. The data are sold by category so you can select and purchase only the files you need.

### Composite Theme Grid Cell Format

In the composite theme grid cell format, the map area is divided into four-hectare (10-acre) cells. Each cell is identified with a series of attribute codes that represent the attributes that apply at a sample point at the center of the cell. There is only one code per cell for each category of data.

This format is particularly useful for combining and analyzing various categories of information. For example, you can determine how many acres of deciduous forest are in a particular county that is on Federal land, or how many acres of cropland and pasture are in a particular hydrologic unit.

When you purchase this format you receive LULC information, as well as any associated map data available for that area. All the categories of data are combined into one file.

## Ordering Instructions

When ordering LULC digital data, specify whether you want the polygon or the grid cell format. If you are purchasing the polygon format, be sure to indicate which files of information you wish to receive and give any technical specifications to ensure compatibility with your computer equipment and software. Also, specify the names of the maps you want or identify the latitude and longitude of the southeast corner and the scale of the map.

## Information

For information about ordering LULC and associated digital data or purchasing source maps and graphics, contact any Earth Science Information Center (ESIC) or call 1-800-USA-MAPS.