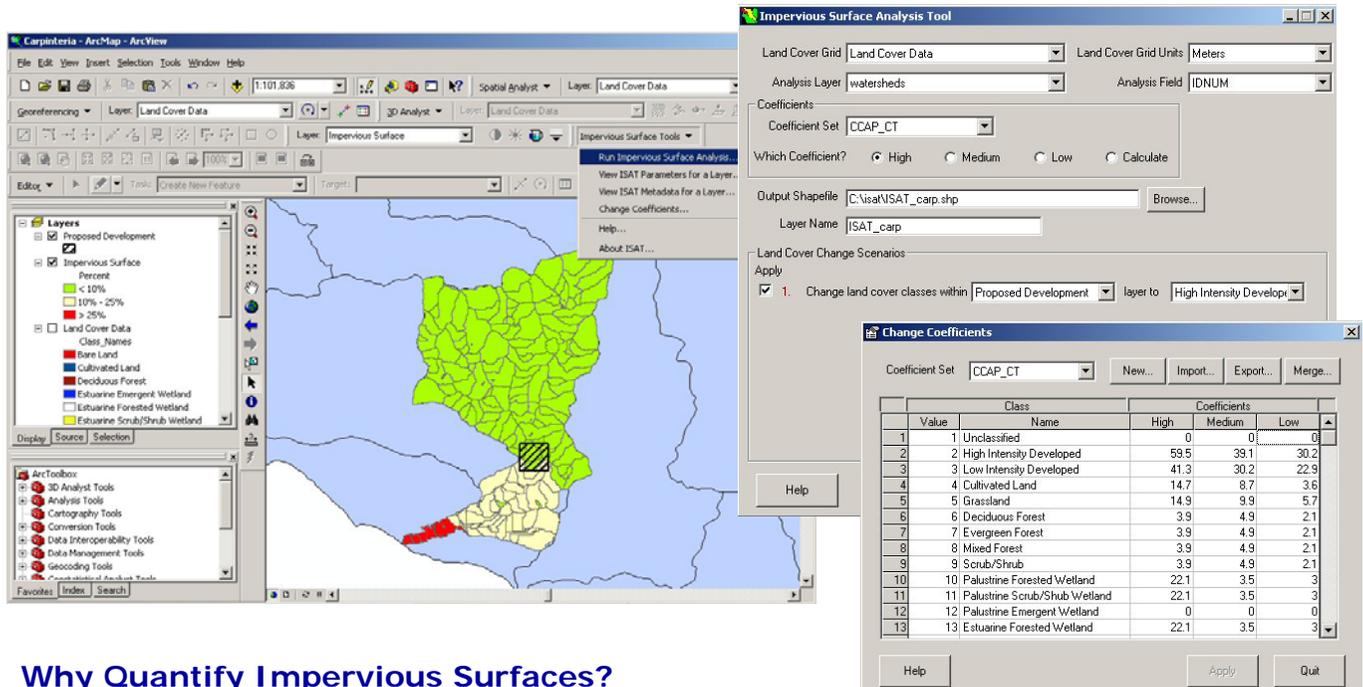


Determining the Percentage of Impervious Surface in a Region

The Impervious Surface Analysis Tool (ISAT), which is available as an ArcView 3.x, 8.x, or 9.x extension, is used to calculate the percentage of impervious surface area of user selected geographic areas (e.g. watersheds, municipalities, subdivisions). The National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center and the University of Connecticut's Nonpoint Education for Municipal Officials (NEMO) Program developed this tool for coastal and natural resource managers.



Why Quantify Impervious Surfaces?

In a watershed, the correlation between impervious surfaces and water quality has been well established, but determining the amount of impervious surface area can be a difficult and time consuming process. ISAT was developed to help managers and planners calculate the area of impervious surfaces and relate this to impacts on local water quality.

For more information on: ISAT

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Impervious Surface Measurement

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The Impervious Surface Analysis Tool

- Requires the Spatial Analyst® extension
- Requires the following inputs:
 - ✓ Land cover grid
 - ✓ Polygon data set for which percentage of impervious surface is to be calculated
 - ✓ Set of land cover impervious surface coefficients calculated for low, medium, and high population densities
 - ✓ Optional population density theme
- Creates the following outputs:
 - ✓ Shapefile that includes green, yellow, and red polygons to represent conditions of good, fair, and poor water quality
 - ✓ Attribute table that includes a calculated value for the percent impervious area and total impervious surface area of each selected polygon
- Incorporates land cover change scenarios to examine how changes influence impervious surfaces

Download ISAT

www.csc.noaa.gov/crs/cwq/isat

