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New Data Track Evolution of a Landscape

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THE marriage of satellite imagery and digital mapping has produced a 21st-century bird’s-eye view of how Connecticut’s landscape has changed over the last two decades.

The newly updated study, by the University of Connecticut’s Center for Land Use Education and Research here, shows not only steady growth of development and loss of forest and agricultural land, but also exactly how, where and why. Using multicolored, town-by-town, web-based interactive mapping, this land cover project is believed to be the most sophisticated of any state in the country.

Many state officials, special interest groups and planners are finding the information, which is free, invaluable, and a number are using it as ammunition for their causes. Yet many communities are unaware that it exists (the Web address for the information is http://clear.uconn.edu/projects/landscape/statewide.htm).

“Fascinating website,” e-mailed Herman Schuler, economic development director in Oxford, which posted the largest percentage increase in development from 1985 to 2006, the years covered by the data. While Mr. Schuler said he wasn’t surprised his town topped the list with a 62 percent increase (Manchester posted the most acres developed at 1,731), he said he was unaware the land cover mapping existed.

“What we wanted to do as educators and researchers is we wanted to be able to try to inform the debate,” said John Rozum, a certified planner who helped develop the data and who is director of the Connecticut Non Point Education for Municipal Officials, which helps communities with planning. “Before this type of study was out, we really didn’t have any way of saying how much was happening.”

The data were originally compiled in 2004 using satellite snapshots from 1985, 1990, 1995 and 2002, which were converted into color-coded 100-foot squares. The 2006 data, released earlier this year, shows that since 1985, Connecticut added 145 square miles of development and 73
square miles of the kind of turf and grass that typically surround development.

In that time, it also lost about 185 square miles of forest and 62 square miles of agricultural land. At 14.7 percent, the percentage of farmland loss was the highest of any land classification. South Windsor had the greatest farmland loss at 1,216 acres. Newtown had the most forest loss at 1,750 acres.

“I find it useful,” said Jennifer Martin, the Connecticut state director of the American Farmland Trust. “It will help us work more closely with the forest land advocates to try to make the case together.”

Stamford has the most developed land at more than 11,000 acres and Bridgeport has the highest percentage of developed land at 82 percent, according to the data. But the areas experiencing the greatest growth, like Oxford and the surrounding Naugatuck Valley region, the new mall areas in Manchester, and the casino region in eastern Connecticut, were at once surprising and expected.

“It was a revelation,” said Chester Arnold, CLEAR’s director. “We didn’t know. We just didn’t know.”

At the Council of Governments’ Central Naugatuck Valley office, Assistant Executive Director Virginia Mason said her group worried that the heavy development in her area — which includes Oxford — is resulting in more impervious surfaces that can cause flooding and prevent water from replenishing aquifers. Using CLEAR’s data, the group prepared studies so towns could see the development trends.

The Litchfield Hills Council of Elected Officials’ planning director, Richard Lynn, also used CLEAR data for his region, but what struck him was how much more farmland had been lost than he thought. “In a region that prides itself on its agricultural heritage,” he said, “to see that much of its ag land going out of production is of concern.”

David LeVasseur, the undersecretary of intergovernmental policy in the Office of Policy and Management, runs the Office of Responsible Growth, created by Gov. M. Jodi Rell in 2006 to coordinate the state’s conservation responsibilities. He said the mapping would help the state and communities analyze growth from a more regional, holistic perspective.

“Something that happens in Ledyard can have massive repercussions in southeastern Connecticut from a transportation standpoint, a public safety standpoint,” he said, as an example.

Representative Brendan Sharkey, a Democrat from Hamden, is co-chairman of the Planning and Development Committee in the legislature, and founder of the ad hoc Smart Growth Working Group whose goal is to develop legislation for the current General Assembly session that
promotes regional smart growth policies.

“I think those who saw CLEAR’s presentation and saw the growth patterns over the last 10, 20 years are shocked by the growth and the loss of open space and the speed with which it’s happening,” he said.