

Tools & Training



CLEAR technical training, led by the Geospatial Technology Program (GTP), helps municipal officials, professional staff and other interested citizens understand and apply geographic information system (GIS), global positioning system (GPS) and remote sensing (RS) technologies to the task of planning their communities. In concert with other CLEAR programs, GTP also develops and adapts specialized technical tools that can be used within the context of these geospatial technologies to analyze, measure and predict landscape change.

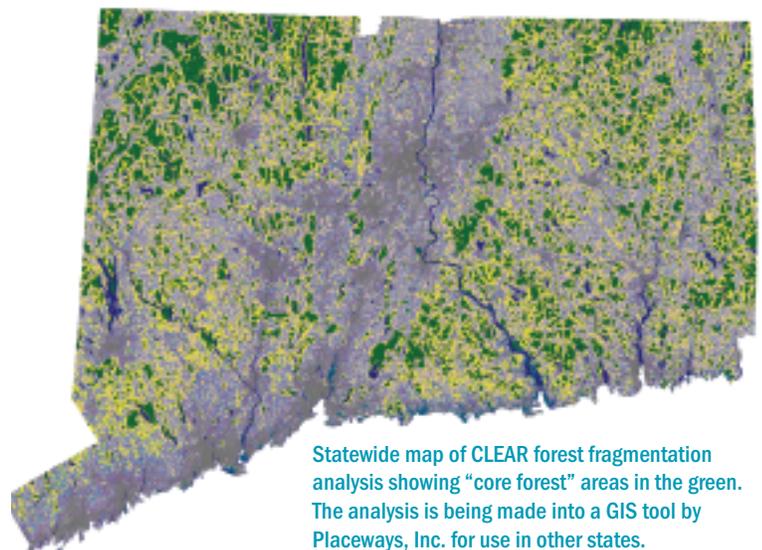
For more information, go to clear.uconn.edu/geospatial and nemo.uconn.edu/tools.

Technology training for communities. GTP conducts approximately 4 GIS and 6 GPS courses per year for a mixed audience of local land use officials, town staff, nonprofit and agency staff, and academics. From 2002 to early 2007, the GTP trained about 175 people in GIS technology, and 150 in GPS technology. About 54% of the GIS trainees were from local government.

Watershed information in support of statewide water allocation. This project, funded by the Connecticut Institute of Water Resources, is assembling a wide variety of data for all of the state's watersheds, for the purposes of supporting water allocation decisions by state agencies. The study is in response to a recommendation of the state Water Allocation Advisory Board.

Adding landscape analysis tools to planning software. CLEAR is working with Placeways, Inc., the developers and distributors of the widely-used *CommunityViz* community planning software, to

create a new *CommunityViz* toolbox comprised of CLEAR remote sensing-based landscape analysis tools. The NASA supported project includes incorporation of the CLEAR forest fragmentation analyses, and may be expanded in the future to include other CLEAR tools, including urban growth characterization and impervious surface estimation.



Statewide map of CLEAR forest fragmentation analysis showing "core forest" areas in the green. The analysis is being made into a GIS tool by Placeways, Inc. for use in other states.

Tools & Training Impacts

CLEAR technology and tools enable better local planning.

CLEAR online web tools, like the *Community Resource Inventory Online (CRI)*, the “Your Town” and “Your Watershed” sections of *Connecticut’s Changing Landscape*, and the *Online Low Impact Development Database* are being used by citizens all over the state. These projects use a fusion of geospatial and web technologies to get CLEAR research and other information into the hands of people who can use it. Although CLEAR websites provide data for GIS users, other portions of the website use interactive internet mapping to provide access to maps and data to non-technical users.

I just had the opportunity to review the new CRI website. What a fantastic site! For municipalities without GIS capabilities, this is a great way to display a community’s resources. And for municipalities with GIS, a great time saver! Thanks to you and your staff for your hard work and vision!

- Judith C. Rondeau, Wetlands Enforcement Officer, Town of Thompson

This site will help local officials and concerned citizens better identify natural resources in their community that should be protected and assist them in determining what steps are necessary to protect them...[It] provides more information to more people and it will improve the local land use planning process all across our state.

- Gina McCarthy, Commissioner, CT DEP

Community Resource Inventory Online - nemo.uconn.edu/tools.htm

The *Community Resource Inventory Online* debuted in January 2007. The website, partially funded by CT DEP, allows citizens to create an inventory of key natural resources and other maps for their town online, without the need for GIS technology. This is a foundational task for a community if it wishes to pursue natural resource-based community planning, a principle taught by many CLEAR programs. In its first 6 months of operation alone, the CRI site has been visited more than 2500 times.

Image, top: A selection of natural and cultural resource maps available from the “Build Your CRI” page. Image, bottom: Sample pages from the “Print Your CRI” page for Farmington, CT.

Large photo, left: NEMO University attendees are trained on the use of geospatial watershed modeling tools, ISAT and NSPECT. Circle photo, left: Students of a GPS training class set up their GPS receivers at Haddam Meadows State Park. (Photo courtesy of Sandy Prisloe, GTP Program.)

Supporting a new approach to statewide water quality regulations. CLEAR faculty are working with the CT DEP Bureau of Water Protection and Land Reuse to investigate the relationship of watershed impervious cover to the health of aquatic invertebrates, a common indicator of overall stream quality. The work is providing the scientific foundation for CT DEP’s precedent-setting approach to implementing the total maximum daily load (TMDL) water regulation program.

A new web tool to support local planning. The NEMO Program, in a project supported by CT DEP, created the *Community Resource Inventory Online (CRI)*, a website that allows visitors to create and print key natural and cultural resource maps for their community—without any knowledge of GIS technology. The website provides technical follow-up to CLEAR outreach programs, which encourage communities to develop a resource inventory as the first step toward natural resource-based local planning. On average, 105 people visit the CRI website weekly (see Tools & Training Impacts, right, for more information).

Geospatial data to support a watershed management plan. In support of a CT DEP funded project to develop a watershed management plan for the Niantic River Watershed in southeastern Connecticut, CLEAR created a detailed aerial photo-based land cover map for the watershed, and used *CommunityViz* software to do a “buildout” analysis showing potential future growth patterns.

