

Research and Information Gathering



With a Spotlight on Northland NEMO

Natural resource based planning needs to be founded on solid information. When land use decision makers have access to current resource information and research tools, they are better armed to make wise decisions for their community. However, local land use decision-makers are often volunteers with limited time, resources and support. Thus, one of the most important roles a NEMO program can play is to assist communities to gather and analyze information, whether it's conducting a simple natural resource inventory or visualizing future development scenarios using sophisticated geospatial tools.

► **Alexander City, Alabama:** Students from the Auburn University Landscape Architecture (AULA) Department, a NEMO Partner, provided Alexander City with a **community blueprint for watershed restoration practices**. The blueprint was intended to encourage stormwater infiltration and storage. Recommendations included the use of pervious concrete, rain gardens and stream restoration and are now being considered for implementation.

► **Arizona:** The AZ NEMO Program is conducting **watershed assessments** throughout the state in an effort to help communities develop watershed based plans. They have identified watershed vulnerability to nonpoint source pollution from abandoned mine sites, erosion due to grazing and contaminants due to septic failure, and are creating GIS maps for watershed documents. With an average watershed size of 7,000 square miles, the program has completed and posted on the web maps covering about 23,000 square miles of the state.

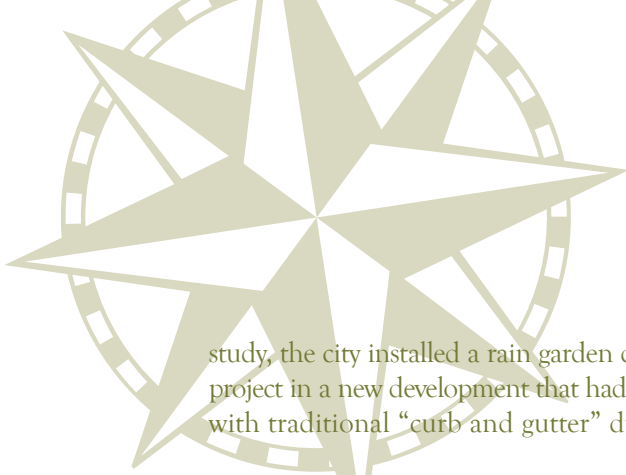
► **Woodstock, Connecticut:** With guidance and advice from CT NEMO, the rural town of Woodstock completed a **natural resource inventory** and posted it on a dedicated website for the public to view and download maps. The inventory has been used as a basis for the town's Plan for Open Space and Conservation, and for revising development proposals.

► **Calcasieu Parish, Louisiana:** The LA NEMO Program used GIS and remote sensing data for the Calcasieu River basin to **demonstrate potential impacts of flooding and nonpoint pollution** to Calcasieu Parish officials. As a result, the Parish Police Jury, the equivalent of a county council, passed an ordinance requiring inspections and maintenance of individual home sewer systems. LA NEMO assisted the Parish's Division of Planning and Development by developing and implementing educational programs for the 25,000 plus homeowners that will be affected.

► **Osceola, Wisconsin:** The Northland NEMO Program worked with the City of Osceola to complete a **stormwater study** focused on protecting a designated trout stream in the area. As a result of the NEMO



AZ NEMO utilizes GIS mapping and watershed assessments to help communities develop watershed-based plans.



study, the city installed a rain garden demonstration project in a new development that had been designed with traditional “curb and gutter” drainage.

- ▶ **Louisiana:** LA NEMO developed a **statewide nonpoint resource directory** listing all local and state agencies and their programs.
- ▶ **Pike Road, Alabama:** The City of Pike Road participated in a stakeholder led planning process in the Spring of 2005, with the Auburn University Landscape Architecture (AULA) team. AULA students created **stormwater friendly designs** for a proposed horse park and trail.



ME NEMO's resource guide for local land use decision makers.

- ▶ **Maine:** The ME NEMO Program developed the **Maine Resources Guide**, a dynamic list of resources available to towns and groups in the land use planning process. It includes specific contacts from Maine, as well as resources from throughout the country.

▶ **Strafford, New Hampshire:** Following educational support from the New Hampshire NEMO effort, NROC, Strafford developed **new maps to be used for conservation planning** and identified priority conservation areas in the town. The town then targeted community education and outreach efforts on land conservation to landowners in priority areas.

- ▶ **Fairhope, Alabama:** As a result of AL NEMO's educational efforts and support, the fast-growing City of Fairhope is conducting a **natural resource inventory** to identify and prioritize areas for natural resource protection.
- ▶ **Duluth, Minnesota:** Northland NEMO used the Impervious Surface Analysis Tool (ISAT) (page 31) to develop an **impervious surface assessment** for the City of Duluth. The city has used that analysis to identify critical habitat and open space areas and prioritize tax forfeiture lands for protection.



SC NEMO is helping coastal communities identify and protect critical natural resources.

▶ **Bluffton, South Carolina:** SC NEMO provided technical and financial support to the Town of Bluffton, located outside of Hilton Head, to develop a **critical resources survey and map**. The survey is being used to identify threats to critical natural resources, and serve as the basis for natural resource protection

ordinances being drafted that help protect wetlands, floodplains, trees, wildlife habitat and stormwater.

- ▶ **Galveston Bay, Texas:** The TX NEMO Program completed a **wetland loss analysis** for the Galveston Bay Watershed. The analysis, funded by the Galveston Bay Estuary Program, determined that at least 14% of the freshwater wetlands in Harris County were lost between 1992 and 2002, with over half of that in the last two years of the study period.

- ▶ **Maine:** The ME NEMO Program used the ISAT tool (page 31) to evaluate existing impervious surface



An analysis on impervious surfaces in Freeport, Maine.

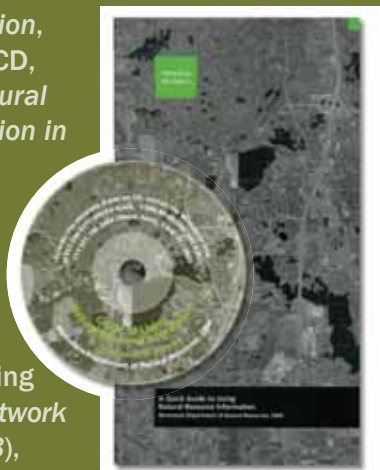
coverage compared to projected conditions for the Town of Freeport. The results spurred the town to **revise their comprehensive plan and zoning** to significantly limit the amount of impervious surfaces at fully built-out conditions.

Spotlight on Northland NEMO

Guidance for Communities on Natural Resource Based Planning

Northland NEMO spans two states, Minnesota and Wisconsin, and is focused on two general areas, the Twin Cities area and the Arrowhead region shared by Minnesota and northern Wisconsin. Due perhaps to their multi-regional nature, the NEMO Team has developed a variety of effective ways to serve as a resource for local decision-makers.

One of the program's most successful initiatives has proven to be a step by step guide to natural resource based planning, which, in true Northland NEMO fashion, comes in two formats: a brochure, *A Quick Guide to Using Natural Resource Information*, and a companion CD, *Guide to Using Natural Resource Information in Local Decision Making*. The Guide was developed as a result of the 2002 National NEMO Network's Open Space Planning Boot Camp (see *Network Initiatives*, page 28),



Minnesota's Guide to Using Natural Resource Information in Local Decision Making brochure and interactive CD.

and was put together by the Minnesota Department of Natural Resources in partnership with the Northland NEMO Program and the Dakota County Soil and Water Conservation District. It is designed to provide planning guidance for people from a wide variety of backgrounds, interests and expertise.

Released in 2004, the Guide is already having an impact on Minnesota communities. For example, the Met Council, which is the regional planning agency for the seven-county Minneapolis/St. Paul metro area, will be using the Five Functional Categories of Open Space highlighted in the guide as a framework for their planning guidance to communities during the next round of required comprehensive plan updates. Met Council also will be providing communities with a CD of GIS inventory information (via ArcReader™). The CD will include five

data layers that correspond to the five Functional Categories of Open Space. Each of the region's 183 communities will also be given a copy of the Guide.

The Guide has received an *Award of Merit in Planning* from the Minnesota Chapter of the American Society of Landscape Architects.

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