

National NEMO Network

Summer/Fall 2007 Newsletter
Volume 9, Issue 2

4 More Years! 4 More Years!

No, we're not talking about national politics. We recently received word from the USDA CSREES Water Quality office that our proposal for partial funding to support our coordination of the Network for another four years was selected for funding. This means more of everything you have come to know, expect, love, appreciate and/or put up with from those of us here at the Hub. We are also planning to enhance support for Network programs with new resources like podcasted presentations and web-based training opportunities.

But that's not all. We are working on a number of new projects that will provide greater opportunities for networking, training, and generally enhancing the technical and topical educational prowess of member programs. For example:

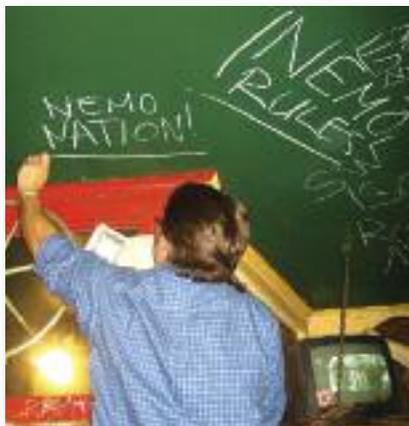
Web Tool Franchising: As highlighted in the last edition of this newsletter, CT NEMO recently debuted a new web-based geospatial tool that allows users to prepare a basic resource inventory for any town in Connecticut, the *Community Resource Inventory Online* (CRI). The Network Hub has just been awarded funding from the Cooperative Institute

of Coastal and Estuarine Environmental Technology (CICEET) to "franchise" this tool in three other NEMO states (Rhode Island, South Carolina and Minnesota). We hope this will serve as a template for helping all member programs add more technical tools to their offerings.

FREMO: Our effort to integrate forests more fully into NEMO programming continues to move forward with a workshop to be held in Annapolis, MD this September. The workshop will provide a primer on forests and forest fragmentation for interested NEMO program coordinators and help them look at integrating what they

learn into their educational offerings. Moving forward, we hope to provide small mini-grants to help NEMO programs engage in forestry based projects in the coming year. More on that soon.

NEMO U6: Continued funding means we are able to move ahead with plans for the next NEMO University, scheduled for the early fall of 2008. While the planning has only just begun, expect greater opportunities for networking, more topical and technical training, and our first effort to pull one of these things



A New Land/Forest Fragmentation Tool

In collaboration with the NEMO Team, the geospatial wizards at UConn's Center for Land Use Education and Research (CLEAR) and Placeways, Inc. (the *CommunityViz* people) have developed a new computer analysis tool that measures the impact of new roads, buildings and other development on the fragmentation of the natural landscape. As NEMO programs know very well, fragmentation—the breaking up of the natural, often forested, landscape into ever-smaller pieces—is widely recognized by researchers as having negative impacts on ecosystem health, wildlife, and water quality.

While there are several methods to measure fragmentation, the new UConn-Placeways tool is unique in that it can be easily used within a geographic information system, or GIS, and applied to widely-available land cover data,

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New Land/Forest Fragmentation Tool

Program Spotlight **A Typical NEMO Program**

Data from the most recent Network Impact Survey



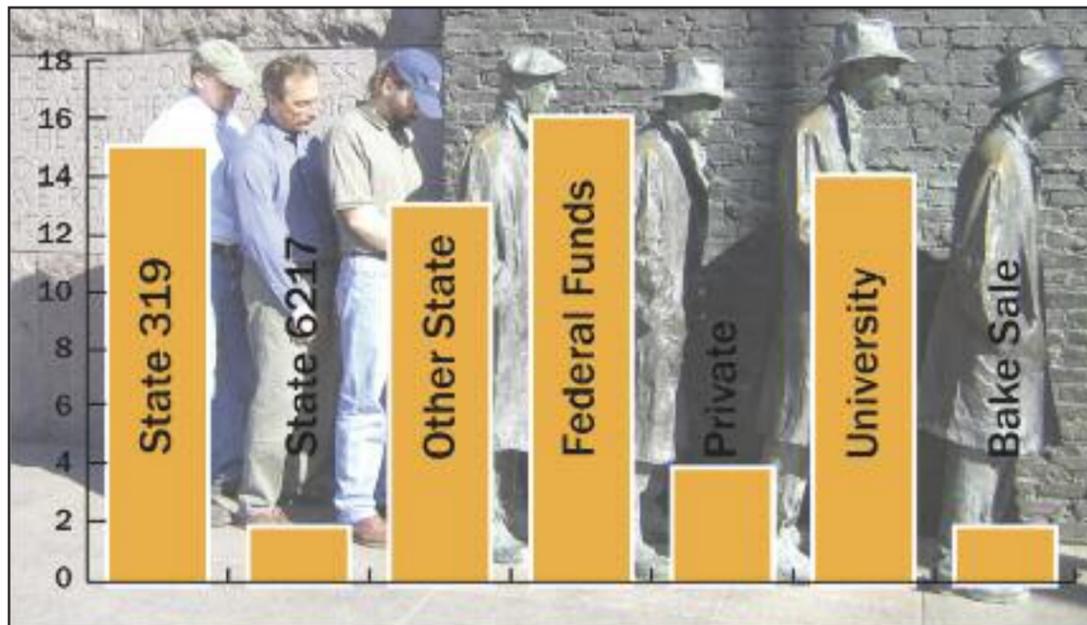
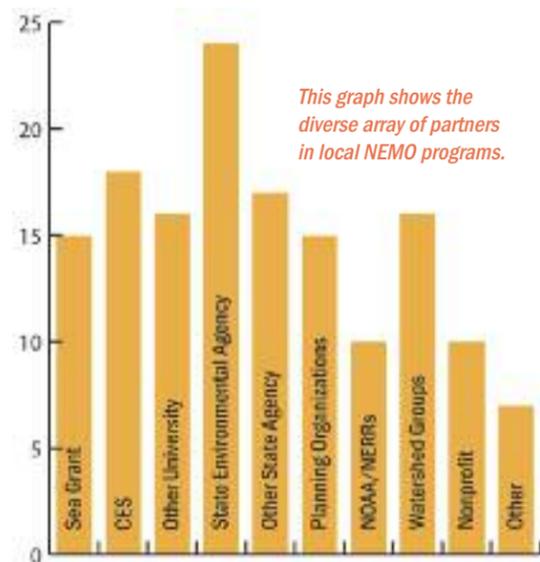
Network Members (and year they joined the Network)

Connecticut	1991
Rhode Island	1992
South Carolina	1996
Alabama	1998
New Hampshire	1998
Maine	1999
Ohio	1999
Oregon	1999
Georgia	2000
New York	2000
Wisconsin	2000
Indiana	2000
Kansas	2001
Michigan	2001
Minnesota	2001
Pennsylvania (1)	2001
Tennessee	2001
Arizona	2002
Colorado	2002
Delaware	2002
Texas	2002
Louisiana	2003
Mississippi	2003
Nevada	2003
North Carolina	2003
California	2003
Vermont	2004
Pennsylvania (2)	2004
Illinois	2004
Hawaii	2005
North Florida	2006
Oregon	2006

As faithful readers of the NEMO Network Newsletter know, we often profile a member of the Network in this space. This time, however, we decided to profile not just one, but all NEMO programs. By that we mean that we have compiled data from the most recent Network Impact Survey on how programs are structured, funded, run, etc. in an effort to provide a snapshot of what a typical NEMO program looks like. Warning: there are several graphs and lots of numbers in this article. The graphing and math averse may wish to avert their eyes.

Funding: When we do scoping workshops in states looking to start a NEMO program, the most common question is “How much does it cost to run a NEMO program?” The answer is, of course, as much funding as you can find. While we could all do exponentially more with more, the average annual budget for a NEMO program is just over \$100,000. The range of funding goes from no funding to \$400,000 per year.

The second most common question we get is “Where does the funding come from?” The answer to this question has varied greatly over the years as typical sources of funding have been redirected or dried up and NEMO programs have been forced to look elsewhere. As a result there is no longer one common source of funds,



Funding sources for NEMO Programs. (Photo courtesy of Julie Westerlund, Northland NEMO.)

but rather several, including state administered Section 319 Clean Water Act funds (Nonpoint Source Pollution) (15 programs), direct federal grants (16 programs) and University funding (14 programs). See graph, above.

Structure: Who leads NEMO programs? The typical NEMO program is university based—27 of the 31 existing NEMO programs are led by either Sea Grant (13 programs) and/or Land Grant/Cooperative Extension (21 programs). State natural resource/environmental agencies are also involved in leading NEMO programs in 6 states (4 of those are in collaboration with universities). Of the programs that do not involve universities, 2 are led by non-profit organizations and 1 is led by a federal agency.

Regardless of who leads, every NEMO program is built upon a diverse array of partners, from state agencies to National Estuarine Research Reserves (NERRs) to planning organizations, and others (see graph, left). In addition to help with trainings, partners provide guidance, technical support, outreach assistance and more.

In terms of staffing, on average NEMO programs are coordinated by 1.5 FTEs. This ranges

from no full time staff (at least not yet for some of the newer programs) to up to 7. The average number of actual educators within a NEMO program is nearly 6, as many NEMO programs rely on partners or trained volunteers to help deliver workshops.

Educational Approaches: Ok, so now we know who is involved and generally how NEMO programs are wired, but what do they actually do? Of course, the bread and butter of NEMO programs continues to be face-to-face workshops. The typical NEMO program gives a workshop or presentation once every three weeks, or 17 times per year, and estimate that they work with 13 communities and reach approximately 450 people per year.

In addition to presentations and workshops, NEMO programs employ the whole gamut of outreach/educational tools to reach their target audience. Almost all NEMO programs supplement their workshops with fact sheets and guidance publications, such as how to



Around the Network

► UConn and NEMO Release Jordan Cove Multimedia CD

It’s finally here! UConn’s College of Agriculture and Natural Resources and CT NEMO have just completed a compendium CD of resources on the Jordan Cove Project. The project, which began in 1995, was designed to determine water quantity and quality benefits of using low impact development/best management practices (LID/BMP) in a residential subdivision.

The multimedia CD highlights the project’s background, has detailed descriptions of the low impact development processes used, lists technical and non-technical results and shows interviews from key players in the process. It is a great resource for anyone looking to demonstrate the effectiveness of LID approaches. All hail to Mike Dietz (formally of CT NEMO) and our own Kara Bonsack for assembling and designing this excellent resource.

(See box below for more information and details on how to order your free CD.)

► New England LID/BMP Database

In hopes of making innovative stormwater practices more widespread, New England NEMO programs and the University of New Hampshire Stormwater Center have unveiled an online database of LID/BMP installations in the New England Region. The site provides details and contact

information on pervious pavers, green roofs, rain gardens, vegetated swales and other stormwater treatment practices that have been installed throughout the region. Users of the site can search by practice or by state and can submit sites for inclusion in the database. It is modeled after CT NEMO’s online LID Inventory (clear.uconn.edu/tools/lid/index.htm) and New England NEMOids worked with the Stormwater Center to help populate it. Check it out at:

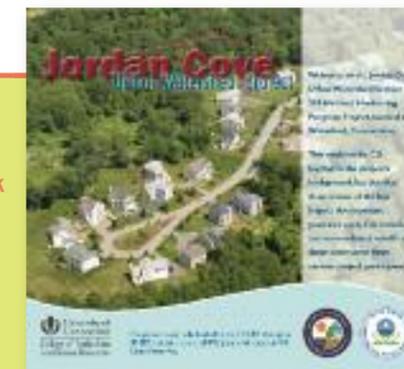
www.erg.unh.edu/lid/index.asp.

► Two New NEMOids in Minnesota Don’t Ya Know

The Northland NEMO Program (Minnesota and Wisconsin) has added two new educators to their already impressive team. **John Bilotta** manages NEMO programming in the Twin Cities area of Minneapolis and St. Paul and assisting in updating NEMO based modules, building models to achieve effective stormwater education to decision makers, and building stormwater education programs for other urban areas in the State. **Shahram “Shane” Missaghi** will be developing new models of stormwater education and providing up-to-date recommendations for stormwater BMPs to urban audiences in the Twin Cities and other urban areas of the state. Welcome to the Network John & Shane! ☀

Jordan Cove Multimedia CD

The Network Hub will be sending each Network member their own copy as soon as they become available to us. Non-members can order a free copy by contacting Dave Dickson at david.dickson@uconn.edu or calling Dave at 860-345-5228.



New & Noteworthy

A New Land/Forest Fragmentation Tool continued from pg 1 . . .

derived from satellite-based information. The tool systematically analyzes each and every pixel of satellite-derived land cover data and compares what it sees to the pixels surrounding it. It then characterizes the state of the forest on a scale from “core forest” (forest completely surrounded by more forest) to “patch forest” (forest completely surrounded by development). The analysis is based on a technique developed by the U.S. Forest Service for analyzing forests on a global scale.

The landscape fragmentation tool will be valuable in demonstrating to local

planning officials and staff the degree to which the natural landscape has been fragmented and helping them make land use decisions that avoid or minimize future fragmentation.

The tool is being made available in two forms. It has been incorporated into Version 3.3 of *CommunityViz* in the form of a largely-automated “wizard” that makes it easy for users to apply. The core functionality is also available as an “ArcToolbox” geoprocessing tool suitable for use by more advanced users of ESRI’s ArcGIS software. 🌳

The ArcGIS version of the fragmentation tool is available for free download from the CLEAR website at clear.uconn.edu/projects/landscape/forest_frag.htm or the Placeways website at www.placeways.com. Background information about the Forest Fragmentation tool can also be found on the CLEAR website and a training in the use of the tool is planned for the next NEMO University. 🌳



Top map: 2002 forest cover map for Connecticut shows 59% forest cover. Bottom map: CLEAR forest fragmentation analysis shows interior forest areas (dark green) cover quite a bit less of the state (18%).

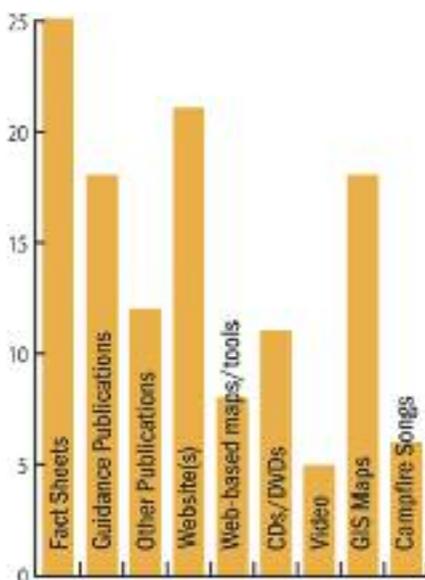
Typical NEMO continued from pg 2 . . .

develop an open space plan or pursue natural resource based planning. See graph below for more on the tools and

publications NEMO programs use to supplement workshops.

The typical NEMO program is also getting more technical in its support of land use officials. About two thirds of NEMO programs offer to review a community’s plans, regulations and/or ordinances, make suggestions for incorporating natural resource protection into them, and provide examples of model regulations. A smaller subset, about one third, are providing geospatial support to communities in the form of new tools, analysis, and/or modeling. The Network Hub continues to seek to make this more typical through trainings and other opportunities for Network members.

In sum, the typical NEMO program does a heck of a lot with minimal funding and program staff—a bargain for any funder. Hint. Hint. 🌳



Graph of the tools and publications NEMO programs use to supplement workshops.

National NEMO Network

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