

National NEMO Network

Volume 2, Issue 1, Winter 2000

An Occasional Newsletter



*Interagency Work Group,
December 7, 1999*

Interagency Work Group Convenes Second Meeting

Group to Increase Cooperation

The National NEMO Network Interagency Work Group met on December 7th at the Silver Spring, Mary-

land offices of the National Oceanic and Atmospheric Administration (NOAA). The Work Group is an informal multi-agency group focused on promotion and support of NEMO and the National NEMO Network.

The Work Group was formed in December of 1997, when officials from USDA, NOAA, EPA, and NASA met to discuss the growing national interest in NEMO and how their agencies could collaborate to support a national network. At that meeting, participants endorsed a vision statement for the Network that began with this sentence: *Within two years, there will exist a functional, effective national network of educational/research projects focused on local land use and its relationship to natural resource protection.*

With the two-year bell tolling at the end of 1999, it was time for an expanded Work Group (see list) to reconvene and check progress toward realizing the vision statement. Members of the NEMO team reported on the surge of interest during those two years and the success of NEMO adaptations in procuring funding (see *NEMO Network Spans the Country!*). The bottom line? — that the Network had gone from a promising idea in 1997 to a firm reality in 1999, with enormous potential for the next two year horizon.

Following the briefing, Work Group members reaffirmed their support of NEMO and the National NEMO Network. Discussion centered on various ways that the member agencies could better collaborate to support the Network, from identifying opportunities to “get the word out” to creation of new funding initiatives. Many participants expressed the value of

having a brief document that described the Work Group and its goals, so that they could more effectively talk to their peers about getting involved with NEMO. Therefore, the major consensus “next step” was the drafting of a Charter that would succinctly outline the purpose and goals of the Work Group. Look for the Charter in coming months on the National Web Page. ■

-CHET ARNOLD

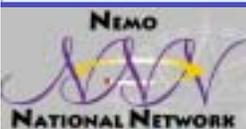
Interagency Work Group

- ☐ USDA
 - Cooperative States Research, Education and Extension Service (USDA/CSREES)
 - Land Grant University System National Water Quality Advisory & Leadership Team (NA/LT)
 - Land Grant University National Environmental Initiative (SUNEI)
 - Experiment Station Committee on Policy (ESCOMP)
- ☐ NASA
 - Office of Earth Science, Earth Science Enterprise
 - Office of Earth Science, Space Grant College Program
- ☐ NOAA
 - Sea Grant College Program
 - Office of Ocean and Coastal Resource Management (OCRM)
 - Coastal Resources Center
- ☐ EPA
 - Office of Policy/Smart Growth
 - Office of Water/Nonpoint Source Control
 - Office of Water/Coastal Management
 - Region 1 Liveable Communities Initiative
 - Region 10 Aquatic Resources Unit
- ☐ American Planning Association
- ☐ National Association of Counties
- ☐ The University of Connecticut
 - Cooperative Extension System
 - Sea Grant College Program

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NEMO Network Spans the Country!

New Projects bring Innovation



Location of Current Network Projects.

The National Network has continued to grow, thanks to the help of the Interagency Work Group (see accompanying article) and some very resourceful and innovative state projects. To date, there are 12 funded projects (shown by the starbursts on the map), 8 projects

with submitted proposals (squares) and 7 projects in the planning stages (triangles). This continued growth will both strengthen the Network and provide the basis for future innovation.

Last Fall, we at NEMO Central conducted a survey of several of the existing NEMO projects. These projects were asked about their organization, goals, and sources of funding. Thirteen projects responded to the survey

We found there is a broad diversity of interests within the Network. While most projects had a topical focus that included nonpoint source pollution, some also included focuses on wetlands, flooding, sprawl, and quality of life issues. Most of the projects targeted municipal officials as their primary audience, but others also wished to focus on conservation groups, K-12 programs, and developers. Many of the respondent projects had developed a slide show presentation for their target audience, but some were also producing fact sheets, web sites, local resource directories, and planning guidebooks.

So how are these projects funding these programs? By using a diverse set of funding mechanisms. By far, the most common funding sources are through state-administrated Clean Water Act Section 319 grants. Other sources of funding include USDA/CSREES Water Quality Program, NOAA grant programs and a variety of state and local dollars.

Project Focus: New Hampshire

New Hampshire's adaptation is entitled "Dealing with Growth". The effort is led primarily by Cynthia

Lay of the Office of State Planning, however, many other groups are directly involved in the program, including the State Department of Environmental Services, NH Fish and Game, NH Estuaries Project, University of NH Cooperative Extension, NRCS, regional planning commissions, among others. This broad coalition's topical focus is the effect that growth and sprawl have on the quality of life and natural resources, particularly water quality, water quantity and habitat degradation. The project combines the educational approach of NEMO with a follow-up technical assistance component. Coalition members are working with municipalities to implement actions to

address local issues raised at the forums.

Currently, the New Hampshire project is focusing on the coastal watersheds; however, there is some support at the state level to expand the program to other portions of the state in the future. ■

-JOHNROZUM

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Website Upgrade and Starter Kit CD

The NEMO Website is undergoing a facelift. Scheduled for early Spring, the website will sport a new look and organization. New services will also be available including slide shows with a standardized script and more detailed information on green design.

The National website will also be upgraded and will include many new services for Network members. In addition to providing access to National NEMO publications, the site will also show where NEMO adaptations are taking place and who to contact, provide a calendar of upcoming events, and have an internet discussion group where you can ask questions or dispense wisdom. The National NEMO website will be the main point of contact for all of the NEMO adaptations around the country

Also scheduled for release in Spring of 2000 is the NEMO Starter Kit CD. This CD-ROM is intended for new NEMO adaptations that are just getting started with presentations and publications. Included on the CD are PowerPoint shows with narration, NEMO fact sheets and publications, and much more. So stay tuned and watch the website for further developments. ■

Measuring Impervious Surface

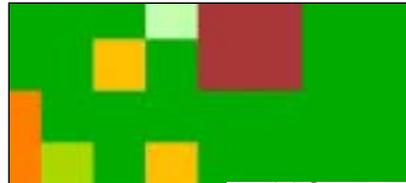
New Study to Improve Accuracy

Have you ever wonder how much impervious surface comes from 1 acre residential developments? How about 2 acre or ½ acre developments, or commercial development? Over the years, the Connecticut NEMO project has used geographic information system technology (GIS) to apply impervious surface coefficients (i.e. the percentage of impervious surface) to land use and land cover (LULC)* data to estimate existing levels of watershed imperviousness. The project also uses GIS, albeit with slightly different techniques, to conduct build-out analyses to predict future levels of imperviousness.

In our past work, impervious surface coefficients were taken from research conducted in other parts of the country where land use patterns vary from what is common in New England. And we started to ask ourselves, how well do these coefficients model the landscape of the northeast? To answer the question, the Connecticut Department of Environmental Protection funded a NEMO research project to use GIS to quantify impervious surface from detailed 1:200 scale local planimetric (i.e. detailed) data for four towns in the state. Using these accurate field data, which included outlines of buildings, roads, driveways, sidewalks, and recreational areas, we were able to develop two sets of locally derived impervious surface coefficients.

One set of coefficients can be used with satellite-derived LULC data to estimate the amount of existing impervious surface within a watershed, a town or any other geographic region. These coefficients were produced by overlaying the LULC data onto the impervious surface data to calculate the amount of impervious surface found within each LULC class.

The other set of coefficients was developed to help perform build-out analyses. These coefficients are based on an analysis of how much impervious surface is found in different parcel sizes in various zones such as 1 acre residential, commercial, industrial, etc. With this information and knowledge of what land can be developed, it is possible to calculate how much additional impervious surface will be created under various development scenarios in a town.



Top: CT Land Use Land Cover (LULC) Data (30 meter resolution) produced from 1995 Landsat Thematic Mapper imagery

Middle: Planimetric and Parcel Data from 1:200 scale source maps

Bottom: Planimetric Data overlaying LULC Data

We will publish a NEMO technical report that summarizes the study's findings...

The results of our research currently are being reviewed and some additional research may be conducted to refine the coefficients further. We will publish a NEMO technical report that summarizes the study's findings and provides both sets of impervious surface coefficients with instructions on how they effectively can be used. ■ **-SANDYPRISLOE**

* The state of Connecticut has a statewide digital LULC data set, produced by the Laboratory for Earth Resource Information Systems, UConn, from 1995 Landsat Thematic Mapper satellite data. This data set includes 28 LULC classes.

Want to learn more about NEMO research and our new NAUTILUS project? Visit our website:
www.resacucom.edu



Your National NEMO Team



A National NEMO strategy session.

upgrade the National Web page, and in general pester our colleagues around the country. We are pleased to report that the pest has been in residence since September, and his name is John Rozum. John has Masters degrees in both ecology and planning, and before finding his life's calling in NEMO had been working for a private planning firm in Kalamazoo, Michigan.

John is up to his armpits in the tasks outlined above, among others – all focused on welding the NEMO Network together with improved communication, and providing better tools and services to our colleagues around the country. Please feel free to call or email John to ask questions, provide us with an update, make comments, or just to introduce yourself.

Joining John are the rest of the new "National Team," comprised of Project Co-Directors Chet Arnold and Jim Gibbons, and special projects coordinator Steven Nakashima. Although only John is focused exclusively on national work, the creation of a four person team will assist us to better plan national initiatives (i.e., complicate John's life) and enable us to be more responsive to your requests for assistance. So, keep those cards and letters coming! ■

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NEMO U Scheduled

Ever wonder what other states are doing with NEMO? Ever want to know what the current research on imperviousness is telling us? Have you always wanted a NEMO tattoo of your very own?

Then NEMO U may be for you. The NEMO University Workshop is scheduled for October 17-19, 2000. The purpose of the workshop is to allow members of the National NEMO Network to learn about new advances in topics affecting NEMO, as well as to discuss what has been learned within the Network. Some of the proposed items on the agenda include site design for water protection, technological advances, and site visits to local projects that showcase NEMOesque site design.

You will have the opportunity to talk to experts in land use planning, site design, and water quality. You will also have an opportunity to discuss the successes and challenges of your project. OK, so we won't be giving free tattoos during the session, but you will be able to enjoy the beautiful confines of NEMO Network headquarters in Haddam, during the New England Fall season.

Interested? Contact John Rozum, National Coordinator for more information. Space is limited, so make your plans early! ■

**9 OUT OF 10
AMERICANS AGREE:**



**NEMO
is
Nifty!**