



Adapting NEMO to Your Area: A Few Key Considerations

Nonpoint Education for Municipal Officials (NEMO) is a University of Connecticut educational program for land use decision makers that addresses the relationship of land use to natural resource protection.

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updated, 4-03

The National NEMO Network Hub has participated in a number of scoping workshops around the country, organized by folks interested in adapting NEMO to their state, watershed or community. Our thoughts on adapting NEMO have evolved considerably since our first workshop in 1995 - to the point where we thought a summary of those thoughts might be helpful to our collaborators out there. Below is our current take on the major issues to be discussed when contemplating NEMO-ization. The issues are listed in the order that we suggest you tackle them. One disclaimer on the incredibly sage advice that follows: ultimately, you have to trust your own instincts on what will and won't work in your area.

Who is Your Target Audience?

Failure to identify a specific target audience is the most common culprit behind failed educational programs. NEMO was planned and designed specifically for local land use decision makers. In Connecticut, this means municipal officials on local planning, zoning, inland wetland and conservation commissions. In your area, this may mean county commissioners, county

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planning staff, watershed councils or some other group. The important thing is to identify the group(s) making land use decisions, and develop a NEMO adaptation that meets their needs. A good educational program can't be all things to all people!

That being said, we recognize that there are other important audiences. For instance, in our watershed projects we target forest and riparian



States in Orange are funded NEMO Programs.
Connecticut (in red) was the first NEMO Program.

land owners in addition to local land use officials. And there are other audiences out there—engineers and landscape architects, for instance—that we are beginning to reach. However, none of these efforts overshadows our basic focus on the relationship of land use to water quality, and on local land use officials as the target audience.

Which Issue(s) Will You Address?

NEMO is about nonpoint source pollution, but there is considerable flexibility as to what particular issues or problems you want to address within the context of linking land use to water quality. NEMO's basic slide presentation breaks down land cover into major categories, and talks about them individually. Our Connecticut landscape dictates that we spend more time with residential and commercial/industrial areas, but you could concentrate on agricultural lands or forests or wetlands, depending on the nonpoint source threats in your area.

Flexibility is the key. There's plenty of opportunity to build in specific relevant information, from water quality monitoring results to information on resource issues like fisheries. As another example, to date NEMO has focused primarily on surface water resources, but there's no

reason that NEMO's basic methodology can't be used for aquifer protection.

What Geographic Area Will You Cover?

We feel that a watershed focus makes the most sense. Working on the watershed level recognizes some basic truths about the best ways to manage and protect water resources; it doesn't, however, change the fact that land use decisions are made at the level of local political units (which is why you need NEMO in the first place!).



We suggest that you start with a focused effort as a first step, and then use that **pilot project** as an example and platform for more widespread programs. A watershed with a workable number of political units is ideal; of course, the definition of “workable” is largely up to

you (and what your resources allow). Here in Connecticut, we seem to be most comfortable with “sub-regional” watersheds, which are in the 25-100 square mile range and involve somewhere around 2-10 towns.

We also strongly suggest that you **select for success**. For each candidate watershed, consider the existing factors that could give your effort a leg up. A few examples:

- Is there an existing motivation, like a well-recognized water quality problem and/or a valuable or well-loved aquatic resource?
- Is there water quality data available? Land cover data?
- Are any of the chief elected officials interested in protecting water resources? Or at least not openly hostile to the idea?
- Do you have a good working relationship and positive track record with any of the towns, counties, nonprofits, or other potential partners?

Sometimes, the answers to these questions will lead you away from a watershed focus and toward a town or county-level project. That's o.k.—NEMO still addresses watersheds, even

if your pilot effort isn't geographically defined by watershed lines. In fact, our own pilot efforts were on the town level, and we've found that these examples serve as effective educational tools to reach other towns across the state. Even so, after considerable town-level work and several watershed programs, it took a few years for us to truly become a statewide resource to all 169 towns in Connecticut. By “statewide resource,” we mean that we are now planning and conducting regional workshops and Internet-driven map resources that make NEMO accessible to all areas of the state.

Some folks at our scoping workshops have asked about launching a statewide program. While we recommend the pilot approach noted above, we feel that our learning curve in Connecticut should help to shorten the time it takes a new NEMO Network program to reach a broader (possibly statewide) audience. If that's a goal of yours, you may want to consider parallel efforts: conducting a pilot watershed project while using an adapted version of our Basic NEMO slide show to reach a wider audience/area. Of course, this level of effort may take more than one partner. Speaking of partners...

What Expertise is Needed? And What About Partners?

Four critical areas of expertise are needed for a successful NEMO program. This expertise can be acquired through different combinations of partners and funding. A few thoughts:

- 1 **Water quality** expertise is practically everywhere, and can frequently be contributed by University and/or state environmental agency staff. Depending on the issues in your area, you might need to graft on some specific expertise; for instance, in riparian zones, tidal wetlands or fisheries.
- 2 **Planning** expertise is perhaps the most difficult to find. However, regional planning agencies are beginning to show up with some regularity in the list of NEMO Network program partners. In some cases, the target town/county itself can contribute this expertise, in the form of professional planners working with the other partners

to educate their commissioners. More important than pure planning expertise is practical experience in dealing with local officials and the land use process; this can be invaluable for the team member who is actually delivering the program.

3 Geographic information systems (GIS)

expertise is becoming increasingly common, as is accessibility to statewide GIS data layers through central state GIS shops and websites. Our sense is that there are usually several GIS outfits out there in each state that would be very interested in a practical, on-the-ground application of their technology (although not necessarily as a freebie—even many University-based GIS shops operate as “cost centers.”). Of course, GIS maps can be “bought” as products, but this is unlikely to work as well as having a GIS expert as a true team member.

4 Educational expertise is the fourth critical component of a NEMO program. NEMO is first and foremost an educational effort, so it is essential that professional educators be involved in the development and delivery of the program.

Forgive us for saying so, but boatloads of money have been unwisely spent by various agencies on “education” that failed because the organizations involved had no educational experience or expertise (read our *Soapbox Editorial 2* for further ranting and raving about this topic). Most of our NEMO adaptations are led by either Cooperative Extension or Sea Grant, University-based organizations with research, public service and education missions. We realize there are other groups out there with educational expertise; for instance, in some Network programs nonprofit groups have assumed leadership in the delivery of the program.

Answering the basic question, Who will be delivering the educational program to the target audience?, goes beyond educational expertise to encompass public perception of the “messenger.” Some partners may not be a good

choice for the “up-front” role of program deliverer, no matter how expert and well-respected the staff. For instance, local officials may not be receptive to presentations from either regulatory agency staff or environmental groups, because these organizations may be viewed as having agendas beyond unbiased, research-based education. Again, you must use your own (collective) best judgement on these tricky issues.

One final consideration: the individual(s) conducting the programs must be good presenters. All the expertise in the world cannot make up for a poorly-delivered talk. Conversely, a good educator doesn't have to have all the answers to be effective.

Above and beyond the four critical elements and the partners that contribute them, there are a whole host of potential partners that can bring things to the table. Some of the things that watershed associations, civic groups, and others can offer to enrich and/or assist a NEMO program include:

- local knowledge of the landscape, both natural and political;
- specific scientific knowledge of natural resources;
- historic knowledge of the area;
- the ability and contacts to get the word out on educational programs.

And don't overlook individual contributions. As far as partnerships go, our experience has been that good individuals can overcome horrible organizational problems, while the best “paper partnership” in the world will be useless if the individual staff from those organizations can't work together.

One last word about partnerships. In a few states, we have had multiple groups interested in adapting NEMO. We will certainly let you know when such a situation arises, but we're not always aware of all NEMO-inspired efforts. Our recommendation is that groups try to work together whenever possible. For instance, it might make sense for one group to take on a pilot effort, while the other oversees a broader educational campaign using the adapted slide

Steps in Adapting NEMO to your state

- 1 Hold a Scoping Session with the Network Hub
- 2 Form a NEMO Advisory Committee
- 3 Select a Pilot Project to develop your program
- 4 Adapt NEMO materials to your state

Capitalize on the success of the Pilot Project to broaden the reach of your program.

show. Pooling resources is one way to attain the critical mass needed to get the program going. Which brings us to...

What Level of Effort & Funding Are We Talking About Here?

How many people will this take? is a question that pops up to the surface of the discussion like a cork. We feel it's best addressed after some of the above issues have been hashed out - that is, if folks are still talking to each other. Our feeling

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is that NEMO is best implemented with dedicated staff responsible for pulling together the expertise/partners required, and organizing and delivering the educational programs. So, we suggest that a successful NEMO Network program needs at least one person-worth of effort (commonly referred to in the business as 1.0 FTE (full-time equivalent), plus related support expenses.

Who's going to pay for this? Well, in our world an "FTE plus some" means \$50,000 - \$100,000 per year, depending on various factors and how much expertise is contributed by partners. NEMO adapters have sought funding sources (successfully and otherwise) from:

- EPA Section 319 nonpoint source funding (through state agency).

- NOAA/coastal zone management section "6217" coastal nonpoint source funds (though state agency).
- USDA Water Quality Initiative funding (through Cooperative Extension).
- NOAA/National Sea Grant College Program funding (through state Sea Grant programs).
- Great Lakes Protection Fund.
- Private charitable foundations.

We believe that many organizations, including the agencies on the National NEMO Network Work Group (NOAA, USDA, EPA and NASA) and some of our other NEMO partners (USFW, The Nature Conservancy, state environmental agencies) are moving toward greater recognition of the critical need to educate local decision makers on land use issues and how they relate to natural resource protection. So, even in a down-sizing era, we think there's reason to hope for future funding for these efforts.

Leaning on NEMO Central

Just remember, we're right behind you (no, really!) The National NEMO Network "Hub" will conduct workshops, respond to phone calls and internet messages, and make educational tools and models available through publications and the NEMO website. The Hub also organizes nearly annual conferences (called NEMO University, or NEMO U) that allows Network programs to interact and facilitates the sharing of experiences and ideas. Expertise in the Network is growing day-by-day and new resources and presentations are being developed by our Network partners that will help your program serve the needs of your local land use officials. We encourage you to call, write, fax, or e-mail, to let us know what we can do to help you out.

The National NEMO Network is a group of affiliated projects that educate local land use decision makers about the relationship of land use to natural resource protection. The Network is coordinated by the University of Connecticut Nonpoint Education for Municipal Officials (NEMO) Program, with funding from USDA/CRSEES, EPA/OWOW and NOAA/NOS.

NEMO is an educational program of the University of Connecticut, Cooperative Extension System, Connecticut Sea Grant College Program and Natural Resource Management and Engineering Department. The Connecticut Cooperative Extension System is an equal opportunity employer. © 2003 University of Connecticut 4-03