Changes to the Decision Making Process

How a community makes decisions about land use can have a major impact on what decisions are made. Who is allowed to comment? Who is tasked with protecting natural resources? Do different departments or communities work collaboratively? Through encouraging partnerships, collaboration, and connecting individual development decisions with a broader community context, NEMO programs are helping communities improve the way they "do business."

AZ NEMO maps and science education have empowered community leaders to bring their concerns to government representatives.

▶ **Arizona:** In Cochise and Navajo counties, AZ NEMO-supported watershed partnerships have become the "New Democracy" with leadership suddenly finding a voice in front of county commissioners. AZ NEMO maps and science education have empowered community leaders to bring their concerns to their legislators and other government representatives.

▶ **Colorado:** AWARE Colorado (the CO NEMO effort) produced a "Water Protection Toolkit for local officials" that was downloaded over 10,000 times last year from the AWARE Colorado website. Through a grant from Coors Brewing Company, it has been distributed to every municipality in Colorado. The Keep it Clean Partnership, a coalition of six communities in the Boulder and St. Vrain watersheds that implements a regional stormwater management program, used the toolkit to develop a "Checklist for Potential Implementation of Low Impact Development (LID)." Developers and planning staff will use the checklist to evaluate potential LID practices that can be implemented at development sites. The partnership is also funding an LID barrier analysis to better understand how LID can be promoted in its communities.

▶ **Colorado:** Respondents to a survey by AWARE Colorado indicated that decision makers, staff and the public discuss water quality more often at planning-related meetings and in board and/or commission meeting materials and documents following participation in AWARE Colorado training.

▶ **Connecticut:** Three towns have created open space planning committees. The city of Torrington created a new position, geographic information systems technician, to help with resource inventories and data analysis for future planning issues.

▶ **Delaware:** DE NEMO developed a natural resource-based planning guide for Delaware communities that was adapted from similar guides in Minnesota and Connecticut. The guide has been distributed to every Delaware county and municipality and is available on the DE NEMO website.

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▶ **Delaware:** DE NEMO led storm drain mapping projects in the communities of Rehoboth, Lewes and Milton. None of the communities had a map of storm drains, so DE NEMO provided a mobile mapper and made a storm

drain data layer for each. DE NEMO also helped coordinate storm drain stenciling programs for Lewes and Milton.

▶ **Delaware:** DE NEMO outreach efforts have contributed to **greater community deliberation**—in local media (print, radio and TV), in town halls and across backyard fences—on the importance of natural resource-based planning and management. Terms like "impervious surface" "source water protection" "riparian buffers" "open space" and "natural resource-based planning" have been rallying cries of informed citizens that are trying to protect natural resources. In Lewes, in particular, residents have been able to influence where and how new development is located.

▶ **Minnesota:** Inspired by a Northland NEMO presentation on natural resource-based planning, the city of Greenfield formed an **open space committee**. The committee drafted and submitted recommendations to the city council to be considered as they develop their next city comprehensive plan.

Local officials in Nevada show an average 20 percent increase in their knowledge of land use impacts to water quality after attending NV NEMO training. (Photo courtesy of T. Svetich.)

▶ **Nevada:** As of the end of 2007, **190 board members or commissioners have attended the 3.5-hour NV NEMO training**, representing 69 percent of targeted groups. Students who completed pre- and post- workshop tests showed an average increase of 20 percent in the number of correct answers on the post-test. One participant wrote "...it changed the way I think about using water and how the water we use gets infiltrated back into the watershed and the river."

▶ **New Hampshire:** After working with NROC (the NH NEMO effort) the towns of Wakefield and Rollinsford **included local watershed organizations in their community-based planning** efforts for the first time.

NY NEMO Sea Grant is helping Long Island Communities address Phase II stormwater issues. (Photo courtesy of NY NEMO Sea Grant.)

▶ **New York:** NY NEMO Sea Grant has provided direct support to nearly 100 Long Island municipalities through review and written feedback on their annual **Phase II stormwater program progress reports**. Examples of changes include the development of sustainable funding mechanisms (village of Kings Point and the town of Babylon); additional staff (village of Manorhaven); a reforestation program (village of Plandome Manor); a septic system inspection program (village of Plandome Manor); equipment procurement (village of Port Jefferson); and planned water quality improvement studies (village of Plandome Manor). Further, interdepartmental work groups have been formed within the towns of Hempstead, Huntington, Islip and Brookhaven to ensure stormwater program coordination and effectiveness.

▶ **New York:** NY NEMO Sea Grant has helped Long Island municipalities evaluate the effectiveness of their stormwater management efforts. For example,

the town of Huntington has made improvements to its **pollution prevention record-keeping** program—the objective being to modify procedures, equipment and schedules as necessary. Several operating departments are developing record sheets to target and quantify the recovery of gray water, oils, grease and sand from streets and storm drains. For example, the highway and general services department reported recovery of nearly 8000 gallons of waste oil.

▶ **New York:** NY NEMO Sea Grant has served as catalyst, facilitator, support and liaison to promote **inter-municipal natural resource protection and restoration**. The towns of Babylon, Huntington and Southampton have established partnerships with neighboring villages to co-implement various stormwater programs including public education, illicit discharge detection, staff training, revision of local laws and procurement of equipment. In addition, NY NEMO Sea Grant has helped establish an inter-municipal stormwater workgroup on the east end of Long Island in the Peconic Estuary drainage area.

An open space inventory and decision matrix is helping focus land construction efforts in Horry County, South Carolina. (Photo courtesy of SC NEMO.)

▶ **South Carolina:** Horry County worked with SC NEMO to conduct a **county-wide open space inventory** of all protected open space and undeveloped, un-protected parcels. This inventory, in conjunction with modeling efforts, was used to establish a **decision-making framework** that analyzes impacts on the county's open space and to develop a list of significant properties that should be acquired, leased, preserved or otherwise protected. Horry county's open space board and staff planners use this list to make recommendations to the county council for property acquisition.

▶ **Tennessee:** The Tennessee Growth Readiness (the TN NEMO effort) workshop series has **increased intra-local and inter-local communication** between counties and towns. For example, in the Duck River Watershed Growth Readiness Workshop, the core team is collaborating to implement a **communication and outreach plan** to work towards adoption of the recommendations, including developing presentations and publications to describe the workshop process and characterize the land use and zoning changes that were recommended. These products were shared with elected officials and decision makers in many of the communities within the watershed; and the state of Tennessee's local planning office has used the materials in staff training.

The Tennessee Growth Readiness program workshops have increased intra-local and inter-local communication between counties and towns. (Photo courtesy of Tennessee Growth Readiness.)

▶ **Virginia:** Following a Tennessee Growth Readiness workshop series, the town of Cedar Bluff was awarded a $52,000 Water Quality Improvement Act grant to **conduct an urban hotspot survey of the town to identify sites for installation of six bio-retention retrofits**. An education plan for the retrofits includes signage and a walking trail—currently in the design phase and scheduled to be installed in the near future. The town is also using information from the workshops in negotiations with developers and businesses.

Spotlight on Connecticut

The Town of Waterford

Waterford, Connecticut, home of the Jordan Cove demonstration project, is an urban coastal town bisected by two interstate highways. The town, which serves as a regional commercial center, has experienced growing development pressures. The amount of developed land has increased by over 20 percent during the past two decades.

In 1992, CT NEMO held its very first workshop in Waterford, Connecticut. CT NEMO staff met with town officials and others to explore the connection between land use and water quality and the impact land use planning and regulations could have. "NEMO challenged the way we thought about development," explains town planner Tom Wagner. "We tended to think of development on the site-by-site basis. NEMO helped us to think more comprehensively on the watershed level."

Soon after the CT NEMO workshop, the Environmental Protection Agency and the Connecticut Department of Environmental Protection began looking for a location to host an applied research study of low impact development practices—what eventually came to be the Jordan Cove project. The survey team found a site within Waterford and approached the town and the developer to assess interest. With assistance from NEMO, Wagner and the Waterford Planning Commission saw the potential value of the project and helped make it happen.

Still, Connecticut is called "the land of steady habits" for good reason, and there was some hesitation in town at being first to try out a range of low impact development (LID) stormwater practices. The existing subdivision and zoning regulations did not allow several of the LID features that were planned for the site. Instead of changing its regulations to allow what was then unproven technology, the planning and zoning commission used its authority under Connecticut law to grant waivers to allow the Jordan Cove subdivision to proceed. Waivers included allowing for reduced road width; the use of porous pavers; elimination of curbs and gutters; the installation of a cul-de-sac with a central bioretention cell; and several other features.

Individual homes at Jordan Cove have pervious driveway materials, rain gardens handling roof runoff, and "no mow" zones in the back yards featuring native vegetation. A sunken, vegetated cul-de-sac center accepts and treats runoff and there are swales located on each side of the street.

Now completed, the "Jordan Cove" project demonstrates that when used in combination, LID practices can indeed be used to replicate the natural hydrology of a site. Waterford's flexibility with waiving traditional subdivision requirements allowed the project to move forward. Given the success of Jordan Cove and other water quality projects in town, Waterford is working with CT NEMO to revise its land use regulations to require the use of LID practices for all new development.

For more information, visit the Jordan Cove website at **www.jordancove.uconn.edu**.