Selections from the NEMO Files

Jordan Cove Urban Watershed National Monitoring Project, Waterford, CT

Soon after receiving NEMO training, the town of Waterford was approached by the Environmental Protection Agency (EPA) and CT DEP to host a novel stormwater research project. The proposal was to build the first research site that would focus exclusively on suburban development. This research project, termed the Jordan Cove Urban Watershed National Monitoring Project, focused on a unique public/private partnership to incorporate and monitor the effectiveness of a variety of stormwater best management practices (BMPs) in the Glen Brook Green Subdivision.

The 18-acre subdivision consists of two parts. The traditional section uses a standard lot layout, 24-ft asphalt roads with curb and gutter drainage collection and turf landscaping. The second section uses a variety of low impact design techniques, such as a clustering of lots, community open space, a 20-ft wide concrete-paver road with a grassed-swale drainage system, a cul-de-sac with a vegetated center island for the retention and infiltration of runoff, and shared driveways with a variety of pervious pavements. The study was constructed so stormwater runoff from the site could be monitored during all phases of construction and for several years after completion.

(Left photo) Sunken, vegetated cul-de-sac center accepts and treats runoff. (Right photo) 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.

Although the results from the Jordan Cove study are still coming in, current monitoring data are extremely favorable. The low impact section of the development has shown less than half the stormwater runoff volume as compared to the traditional development. In fact, early results show that during storm events the low impact sites seem to be mimicking the natural hydrology of the area. This reduction in runoff means fewer pollutants getting to the nearby stream and less impact from increased volume of water coming off development.

Contact NEMO

John Rozum, *NEMO Program Director*
Email: john.rozum@uconn.edu
Phone: 860-345-4511
Fax: 860-345-3357
Website: nemo.uconn.edu

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From Wild Rivers to Parking Stalls,

Progress in Protecting Water Resources

One solution to the problem of too much parking: Westfarms Mall in West Hartford and Farmington features an engineered grass overflow parking lot, to promote infiltration of stormwater.

Parking Utilization Study

Many parking standards are based on peak utilization periods, such as the week before Christmas. As a result, most parking lots are only half-full during the majority of the year. The Litchfield Hills Council of Elected Officials and the Northwest Council of Governments, in collaboration with the NEMO Program, jointly sponsored a two-phase parking study conducted by Fitzgerald and Halliday, Inc. Phase I of the study focused on a detailed parking assessment of northwestern Connecticut. Predictably, the study found that the majority of lots were underutilized, with only 45% of the parking spaces occupied when surveyed. This trend was even more apparent in "big box" retailers who, on average, had only 25% of their lots occupied. Phase II of the study suggested specific strategies and standards, including model regulations, for parking requirements that more realistically match the parking needs of specific land uses. It also recommended considering alternative approaches, such as bioretention and pervious pavements, for reducing the volume and improving the quality of stormwater from parking lots. A link to the complete study can be found on the Reducing Runoff section of the NEMO website.

The Eightmile River Story

The Eightmile River watershed drains into the lower Connecticut River, and comprises a 63 square mile area of unusually intact forest and agricultural lands within the towns of East Haddam, Lyme and Salem. In 1993, the NEMO Program, working with UConn's Cooperative Extension Forestry Program and the Connecticut Chapter of The Nature Conservancy, began an educational effort targeting both municipal decision makers and private property owners within the watershed. Through the formation of an Advisory Committee made up of local town leaders and non-profit organizations, the Eightmile River Watershed Project characterized the watershed using GIS resource inventories and local expertise. The project led to a renewed commitment from the three constituent towns to protect this uniquely pristine watershed. This was crystallized by a tri-town Conservation Compact signed by the three First Selectmen, in which the towns agreed to work together to grow in a way that protects the high-quality resources of the watershed. Since the signing of the Compact, Eightmile towns have formed open space committees, initiated local land trusts and protected hundreds of acres of forest and farmlands. Additionally, two of the towns participated in the NEMO Municipal Initiative (see the Salem and East Haddam Profile). Under the guidance of The Nature Conservancy, the Advisory Group has requested that the watershed be placed under the federal Wild and Scenic Rivers program. As of 2004, an in-depth study of the watershed, funded by Congress, is being conducted as a first step for Wild and Scenic designation.

First Selectmen of Lyme, East Haddam and Salem sign Watershed Compact in 1997. (Photo right) Chapman Falls, near the headwaters of the Eightmile River in Devil's Hopyard State Park.