Pennsylvania Lake Erie Nonpoint Education for Municipal Officials (NEMO)

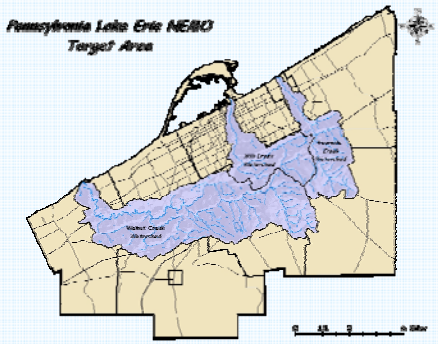
http://www.behrend.psu.edu/seagrant/extension/nemo.html

NEMO Background

NEMO, an educational program for land-use decision makers addressing the link between land-use and natural resource protection, was originally developed in 1991 by the University of Connecticut's Cooperative Extension System and Natural Resources Management and Engineering Department, and the Connecticut Sea Grant College Program. In 1995, NEMO became a national initiative.

The goal of the Pennsylvania Lake Erie NEMO program is to improve water quality in the Pennsylvania Lake Erie drainage basin by increasing local land-use decision makers' knowledge of the link between land-use and water quality.

The Pennsylvania Lake Erie NEMO program is administered by the Pennsylvania Sea Grant Program located at Penn State Behrend. The primary target regions for the program are those municipalities located within the Walnut Creek, Mill Creek, and Fourmile Creek watersheds in Erie County. These areas were chosen because they are heavily impacted by urban growth.



Conservation by Design

With increased development occurring in the Pennsylvania Lake Erie NEMO target area, open space is quickly becoming scarce. One approach adopted by NEMO staff to combat the increase of development and loss of open space is to promote the construction of *Growing Greener: Conservation by Design* subdivisions amongst municipal officials, developers, and engineers.

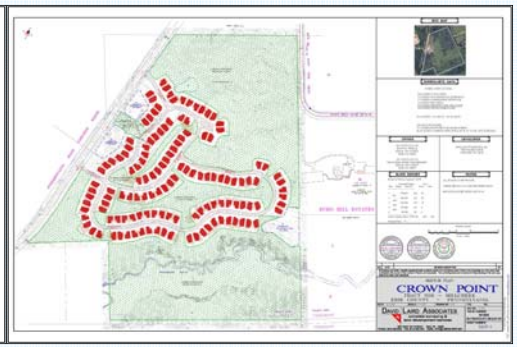
The *Conservation by Design* approach, developed by the Natural Lands Trust and Pennsylvania Department of Conservation and Natural Resources, allows communities to preserve networks of open space by promoting the construction of conservation subdivisions in place of conventional subdivisions.

In Conventional subdivision design, often referred to as "cookie cutter" subdivisions, all the developable land on a parcel is subdivided into roads and housing lots, and open space usually only consists of undevelopable land such as wetlands and steep slopes.

In contrast, conservation subdivisions allow for the same number of units to be built on a tract of land while preserving at least 50-percent of the tract as open space (not including environmentally sensitive areas such as steep slopes, wetlands, and floodplains). Typically, the open space is permanently conserved through an easement and managed through a homeowners association, land trust, or municipality.

Benefits of preserving open space through conservation design include: protects streams and water quality, provides habitat for plants and animals, preserves "rural" atmosphere, provides recreational opportunities, protects home values, often reduces costs of municipal services, and increases profit margin for developers.

Crown Point Conservation Subdivision*: Millcreek Township; Erie County, Pennsylvania



Conventional "Cookie Cutter" Subdivision vs. Conservation Subdivision

Land Development/Open Space Preservation	*Land Development/Open Space Preservation*
Total Area = 59.40 acres	Total Area = 63.40 acres
Developable Land = 44.20 acres	Developable Land = 52.60 acres
Land Proposed for Development = 44.20 acres	Land Proposed for Development = 17.70 acres
# of Units = 64	# of Units = 132
Density = 1.4 units/acre	Density = 2.5 units/acre
Wetlands/Steep Slopes = 5.40 acres	Wetlands/Steep Slopes = 5.40 acres
Common Open Space = 0.00 acres	Common Open Space = 34.90 acres
Percent Open Space = 0%	Percent Open Space = 66%
Cost	***Cost***
Storm Water Management = $334,300	Storm Water Management = $280,770
Water Line = $215,600	Water Line = $246,200
Sanitary Sewer = $275,000	Sanitary Sewer = $482,000
Roadway = $517,230	Roadway = $464,820
Total Infrastructure (including contingency) = $1,476,343	Total Infrastructure (including contingency) = $1,621,169
Infrastructure Cost per Unit = $23,068	Infrastructure Cost per Unit = $12,282
Profit per Unit (15% of $350,000) = $52,500	Profit per Unit (15% of $200,000) = $30,000
Unit Profit = $3,360,000	Unit Profit = $3,960,000
Total Profit (minus infrastructure cost) = $1,883,657	Total Profit (minus infrastructure cost) = $2,338,831

*The preliminary sketch plans, land development data, and cost comparison data provided by Laird Associates do not represent the final development plans and are subject to change as the development plans are finalized. The preliminary sketch plans, as presented, do not fully represent the concept of *Conservation by Design* set forth by the Natural Lands Trust and Pennsylvania Department of Conservation and Natural Resources.

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