

E&M Engineers and Surveyors, PC

Winter 2007

Springville, New York 14141
(716) 592-2851

Bradford, Pennsylvania 16701
(814) 362-5546

www.emengineers.com

Continuing Education

By: Roy R. Pedersen, P.E.

Practicing Engineers and Surveyors licensed in New York State have been required for several years now to obtain regular continuing education (CE) to stay current in new technology and regulations. The specific amount of CE required is 36 hours over a 3 year period, or 12 hours per year. Most CE classes are offered in whole days and provide 6 hours per day.

Pennsylvania has recently passed legislation requiring Engineers and Surveyors to obtain 24 hours of CE every 2 years, or 12 hours per year. Practicing Engineers and Surveyors must keep their own records and certify on license renewal that they have obtained the minimum amount of CE. State licensing boards have the option to request documentation of an individuals CE course work.

While attending 2 days of classes per year is somewhat expensive and takes us away from our project work, it provides our clients and the general public who use our designs an extra measure of assurance that the work is prepared by competent licensed professionals.

One result of states requiring annual CE that it makes retired and semi retired engineers think twice before renewing their licenses, due to the cost of CE.

While CE is an expense in time and money, and while many engineers and surveyors were obtaining CE voluntarily prior to it becoming mandatory, the new laws are a good idea because they require all engineers and surveyors to make CE a priority.

Environmental Constraints to Development

By Glenn D. Cooley, PE

Zoning, water, sewer, electric and gas utilities aside, there are many natural elements which can affect development of property. Both developers and municipal officials need to understand them. Developers must review a piece of property (before they purchase it) to study these issues. Regulators need to understand the constraints and how they may be important to the review of projects before them; especially in regard to their local codes and laws. In no particular order, here are some important environmental constraints.

Phase II stormwater regulations are now in effect for all projects of 1.0 acres or more. These may be subdivisions or commercial developments. Even estate homes where the site disturbance is over the threshold are affected.

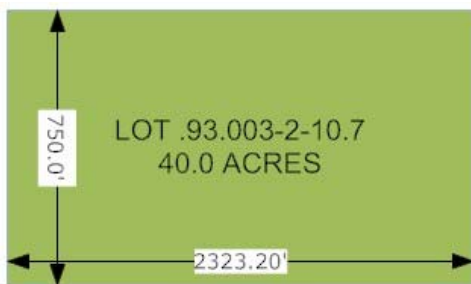
Also, stormwater "dry ponds" are no longer an acceptable practice. More complex systems to treat stormwater for removal of suspended solids and phosphorus are necessary. The facilities usually are larger than in the past taking up more land on the development parcel.

State and Federal wetlands have become more of an issue as easily developed land becomes scarce. Available large tracts of land often have one or both types of wetlands, each has its own set of regulations. Disturbance of either type of wetland requires permits and mitigation measures. State wetlands also incorporate a 100 foot buffer around them within which few activities can be conducted without a permit. And, yes, you can have wetlands on a hillside!

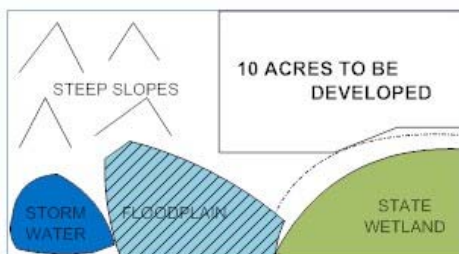
Steep ground slopes can also limit development opportunities. Some municipalities have specific grades mentioned in their zoning that limit development density or prohibit development. An example would be: slopes 0-10% can have 5 lots per acre; 10-15%, 4 lots per acre; 15-25%, 2 lots per acre; greater than 25%, no structures permitted. While this is a fictional criteria, similar ones are in effect around the area.

If you don't have steep slopes you could have floodplains with which to contend. Actually the layman's idea of a floodplain as one entity is incorrect. A floodplain is comprised of the floodway and the floodway fringe. A floodway (usually centered on the stream) cannot be built upon while the fringe area on either side of it can be with certain restrictions. Again these limit the lot area to be developed. Permits from the municipality are required for fringe area construction.

Other environmental issues can include poor soils, critical wildlife habitat, prime agricultural land and scenic views. What once looked like a nice 40 acre tract could in fact only produce 10 acres of build-able land. Developers, watch out; municipal officials be aware.



LOT ON A TAX MAP



LOT IN REALITY

The Facts About the 2002 Bioterrorism Act and How it Affects Your Community Water System

by: Garrett M. Hacker, I.E.

On June 12 of 2002, President Bush signed the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 into Law. This law more commonly known as the Bioterrorism Act amends the Safe Drinking Water Act (SDWA) by requiring certain community water systems (CWS) to conduct a Vulnerability Assessment (VA) and prepare an Emergency Response Plan (ERP). The amendment also requires the community water system to certify to the Environmental Protection Agency (EPA) that the VA and ERP were completed.

What does this mean to you the community water supplier? If you represent a community water system and serve more than 3,300 people or you have obtained funding from the United States Department of Agriculture Rural Development for a community water system project then you must prepare a VA, ERP and submit a certification.

Vulnerability Assessment is the identification of weaknesses in water system security, focusing on defined threats that could compromise its ability to provide adequate potable water, and/or water for firefighting. The assessment should be conducted on all aspects of the system including well heads, surface water supplies, treatment plants, storage tanks, pumps, distribution systems and other critical components of the community water system.

The Emergency Response Plan implements a course of action for the potential threats identified in the VA. The eight (8) core elements of an ERP include: 1) System specific information, 2) CWS roles and responsibilities, 3) Communication procedures; who, what, and when, 4) Personnel safety, 5) Identification of alternate water sources, 6) Replacement of equipment and chemical supplies, 7) Property protection and 8) Water sampling and monitoring.

The EPA has set the following deadlines for completion of VA's and ERP's:

Systems Serving Populations of . . . 100,000 or more
Submit VA and Certification by . . . March 31, 2003
Certify ERP by September 30, 2003

Systems Serving Populations of . . . 50,000 to 99,999
Submit VA and Certification by December 31, 2003
Certify ERP by June 30, 2004

Systems Serving Populations of . . . 3,301 to 49,999
Submit VA and Certification by June 30, 2004
Certify ERP by December 31, 2004

If you are responsible for your community water system and have questions regarding conducting a Vulnerability Assessment or preparing an Emergency Response we can help.

Our Land - Joseph Ellicott the Land Agent
by James Nearhood, PLS

Joseph Ellicott had finished the land survey of the 3.3 million acre Holland Land Purchase of Western New York. It had taken from the fall of 1797 to the fall of 1800 to complete the field survey, assemble the survey report and complete the mapping. All of this was delivered to the Philadelphia Office in late October, 1800. Joseph was then named Land Agent for the sale of individual tracts and development of the 3.3 million acre Western NY purchase.

Joseph arrived at the settlement called Buffalo Creek on December 28, 1800, after spending Christmas on the Indian trail. At first Joseph stayed with Asa Ransom, a silversmith, who had been making trinkets for trade with the Indians. He had first met Asa during his first traverse through Buffalo Creek in the fall of 1797.

The Holland bankers financing this development instructed Joseph to begin selling tracts as soon as possible. At this time he began the subdivision of the purchase into Townships and Lots. Roads were laid out along the major Indian trails and accommodations for travelers had to be planned. Joseph had sold 150 acres to Asa Ransom in Clarence to build a large two story Inn for

travelers.

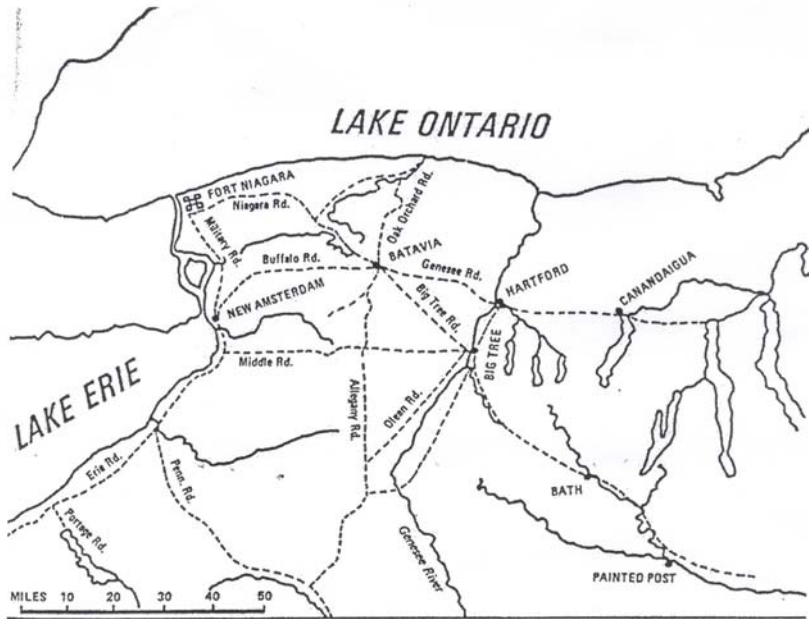
Along with the above projects, Joseph was planning the City of New Amsterdam at the mouth of Buffalo Creek. He wanted to name it that in honor of the Holland Bankers. As his city plan grew it included a curved street named Swan Street. It was his plan to build a large curved house on his reserved parcel along Swan Street. The present villagers did not agree with his plan for a large house and especially his name of New Amsterdam. They preferred Buffalo Creek and the name continued, eventually it was shortened to just Buffalo.

In January of 1801, having his fill of Buffalo Creek, Joseph moved his land office to Asa Ransom's house in Clarence on the new road from Batavia to Buffalo Creek. The work on the massive subdivision continued along with the planning and laying out the new villages along the old Indian trail roads. Early in 1802, he moved his office to the existing frontier city of Batavia. The original stone office building is standing today on the south side of West Main Street. It is now called the Holland Land Company Museum.



Next time the Great Subdivision continues.

1804 Roads



ROADS IN WESTERN NEW YORK — 1804

PRRST STD
U.S. POSTAGE
PAID
Springville, NY
PERMIT NO. 23

E&M ENGINEERS AND SURVEYORS PC
482 S. CASCADE DRIVE
PO BOX 159
SPRINGVILLE, NY 14141-0159