



SWPPP: Protecting Long Island's most precious resource...our water

May 22, 2009 - Long Island

Rain again? Not only does precipitation disrupt our weekend plans, but without proper stormwater management measures in place, inclement weather also impacts the health of our ground water and surface waters. As rainfall and snowmelt run into our storm drains, rivers, lakes and oceans or seep into the ground, the stormwater carries with it contaminants that pollute our drinking water and foul our recreational water bodies. With the continued growth of population and an increase in development, stormwater management is a critical step to reduce and treat runoff, and ultimately, to protect our drinking and recreational waters.

The United States Environmental Protection Agency (EPA) enacted the Clean Water Act in 1972 in an effort to safeguard the nation's surface waters from pollution. In accordance with federal and state law stemming from the Clean Water Act, developers are required to prepare Stormwater Pollution Prevention Plans (SWPPP) for any new or redevelopment project greater than one acre in size/disturbance. SWPPP plans address mitigation and handling of stormwater runoff and pollutants from the site during and after construction activity. As the land's natural features are diminished and replaced with new development, stormwater runoff intensifies and increases the amount of potential contaminants that are carried into nearby surface waters. In order to protect our resources, implementation and enforcement of stormwater management practices must begin at the source. As of 2008, the New York State Department of Environmental Conservation (NYSDEC) implemented laws that require municipalities to establish local stormwater management programs and regulations. These local regulations are intended to establish criteria to reduce impact to the quantity and quality of stormwater runoff during pre and post construction as compared to the condition of the site prior to development.

Developers and contractors aren't the only ones responsible for stormwater management; an increased responsibility now falls on the governing towns and villages. As owners and operators of Municipal Storm Separate Sewer Systems, or MS4s, local municipalities are required to develop, implement and enforce Stormwater Management Plans to protect the water entering their storm sewer systems. Delegating the review of SWPPP plans to local municipalities improves control and enforcement of stormwater management and treatment practices. It also affords the local municipality the opportunity to require more appropriate local measures supplementary to the broad plan as originally outlined by the EPA and NYSDEC.

In an effort to better understand the impacts of the stormwater runoff in downstream areas, many municipalities have initiated a mapping system of their storm sewer infrastructure. This provides an enhanced understanding of the quantity of stormwater runoff and the pollutants it may carry. The discharge points may be surface waters or retention facilities. Since most stormwater on Long Island

does not pass through a treatment process before being discharged at these locations, control of pollutants must occur prior to the stormwater leaving the site. As such, many municipalities require on-site pretreatment practices.

New York City has enacted zoning laws that require sites with at least 18 parking stalls to implement stormwater retention cells, otherwise known as bioswales, along the perimeter of the site and within the interior of parking lots. Not only is this an efficient management of stormwater runoff, but it also acts as natural irrigation for plants. Special ground cover within the landscaped areas is designed to act as a natural filter for contaminants collected from the parking lot.

Developers, contractors and municipalities all rely on civil engineers to design effective means of protecting our waters. In turn, the civil engineering field continues to impact the evolution of stormwater management by continuously developing innovative drainage design solutions. With over 27 years of experience in the civil and consulting engineering field, Bohler Engineering routinely prepares, reviews and inspects SWPPP plans for our clients throughout New York City and Long Island. Our firm has extensive knowledge of EPA and NYSDEC guidelines and is an industry expert in stormwater management facility design. Our licensed engineers and in-house Certified Professional in Erosion and Sediment Control (CPESC) diligently follow the evolution of SWPPP regulations to stay on the cutting edge of protecting our most precious resource on Long Island...our water.

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