Stormwater Management and Landscaping Requirements

Overview of Regulations

City Council has passed legislation to improve the aesthetic and environmental quality of Binghamton through storm water management, green infrastructure, and landscaping requirements.

The following reasons serve as impetus for the new regulations:

Flooding and Erosion— stormwater runoff flows directly from impervious surfaces to the rivers and streams contributing to flooding in the greater Binghamton area.

Treatment Facilities— Binghamton's aging combined sewer system and wastewater treatment plant are overburdened by the volume of runoff from impervious surfaces.

Low-Impact Development (LID)

"Small on-site green infrastructure practices, also known as low-impact development (LID), can serve as smart alternatives to costly conventional, end-of pipe storm water management practices."

Trees and landscaping help create more attractive streets and retain storm water.

Quality of Water in the Susquehanna River— the Chesapeake Bay Watershed Program and the EPA have continually given poor water quality ratings to our local rivers, which are exacerbated by polluted storm water runoff. Runoff from parking lots is often composed of toxic metals and petrochemicals from vehicular oil leakages. Better retention of water on-site, particularly through vegetation, is a cheap, natural filtering process.

Urban Heat Island Effect— more trees in parking lots and along streets means fewer heat-related health problems.

Quality of Life and Property Values— trees and landscaping contribute immense aesthetic value to a community. People are more likely to frequent businesses and restaurants if surroundings are shady and well landscaped. Studies show that trees and greenery equate to higher property values. A single urban tree can provide over $300 annually in air and water filtration, not to mention promoting biodiversity.

The regulations discussed on the following page would reduce the impacts of minor flooding events, reduce the burden on the sewage treatment facility, contribute to improved water quality of the Susquehanna and Chenango Rivers, reduce the urban heat island effect and improve the quality of life and property values of Binghamton.

Chapter 227 Erosion Control and Stormwater Management

In order to issue a grading, building and/or demolition permit, the city requires an Urban Runoff Reduction Plan **(URRP)** for certain projects not requiring a Stormwater Pollution Prevention Plan including: (1) new off-street parking and/or loading areas containing 20 or more parking spaces or 5,000 square feet, or additions, alterations, or resurfacing of existing off-street parking and/or loading areas resulting in or involving 20 or more parking spaces or 5,000 square feet or more of site area; (2) commercial, mixed use, multi-family residential involving 3 or more dwelling units, and/or industrial construction projects creating, replacing or adding 1,000 square feet or more of impervious surface area; (3) single-family or two-family residential project creating, replacing or adding 2,500 square feet or more of impervious surface area including associated off-street parking and loading areas; (4) any project creating, replacing or adding new impervious surface area located within the Federal Emergency Management Agency's Special Flood Hazard Area; (5) subdivisions under 1 (one) acre.

An URRP must include the use of Green Infrastructure in order to retain a ten (10) year storm event on-site. The practices incorporated should increase permeable areas, minimize the amount of runoff directed to impermeable areas and/or maximize storm water storage for reuse, and reduce parking lot pollution.

Chapter 410 Zoning

Article X, Off Street Parking Loading & Storage revisions require enhanced perimeter and internal landscaping for off-street parking lots and increased bicycle parking requirements. Additionally, lot coverage has been reduced for the C-1, I-2 and I-3 Zones except for sites with green roofs.

"Green Infrastructure"

Green Infrastructure is the term used to describe natural systems that capture, cleanse, and reduce stormwater runoff using plants, soils, and microbes.

Conventional "grey" infrastructure includes systems of pipes and channels that bring high quantities of water to the river or wastewater facility, instead of being percolated into the landscape. Unfortunately, these systems are outdated, costly to maintain, and poor at addressing water quality issues. Communities across the country are looking to green infrastructure to save money and enhance environmental quality.

Additional Resources

City of Binghamton Code & Legislation Chapter 227, Erosion Control and Stormwater Management and Chapter 410, Zoning.

www.cityofbinghamton.com

www.streamteamok.net/Doc_link/Green%20Parking%20Lot%20Guide%20%28final%29.PDF

http://www.dec.ny.gov/docs/water_pdf/swdm2010chptr5.pdf

http://cfpub.epa.gov/npdes/home.cfm?program_id=298

http://water.epa.gov/polwaste/green/

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/

http://cfpub.epa.gov/npdes/stormwater/swbasicinfo.cfm

http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm

http://www.epa.gov/owow/NPS/lid/

http://www.nrdc.org/water/pollution/storm/stoinx.asp

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