

LUZERNE COUNTY STORMWATER MANAGEMENT ORDINANCE (SWM)

- The Luzerne County SWM Ordinance, previously adopted under Act 167, was updated as part of the State mandated Separate Storm Sewer System (MS4) participation program. As part of the mandatory program, all applicable participating municipalities were required to adopt the Luzerne County SWM Ordinance, modified as necessary and applicable for each municipality. All municipalities should be enforcing the Ordinance.
- Land Development and Subdivision reviews by the municipal engineer or Luzerne County Engineer (when under their jurisdiction) should ensure that the plans are in compliance with the applicable SWM Ordinance.
- Following completion of construction, all post-construction reviews are shared. The municipal engineer will follow-up on making sure that the appropriate documentation is filed and/or recorded. The municipality will designate the appropriate staff to perform future inspections and monitoring, where necessary.

SWM ARTICLE III – STORMWATER MANAGEMENT STANDARDS

- This Article specifically deals with the technical design standard requirements to be addressed for compliance with the Ordinance. These requirements are all of a technical nature and generally, only the reviewing engineer would have the technical background to review and determine compliance with these standards for any SWM Plan and/or Land Development Plan submitted for municipal review, and to ensure that the municipality does not inadvertently approve a plan that would be in violation of the applicable SWM Ordinance.

TABLE III.1 – STORMWATER MANAGEMENT REQUIREMENTS AND EXEMPTIONS

- SWM Permit Applications must be submitted for all regulated activities, regardless of whether or not the preparation and submission of a SWM Plan is exempt.
- Although it is possible that a municipality may have an individual in-house staff member that can determine what level (1, 2 or 3) of activity (Proposed Impervious Area and Proposed Total Earth Disturbance) a project falls under to determine if a SWM Plan is required, it is still advised that he/she consult with their Municipal Engineer to ensure that their determination is correct, prior to processing the SWM Permit Application.
- Exemptions are as listed in Section 302 under Table III.1.
- Examples of the three (3) levels of activity listed in Table III.1. will be discussed.

LAND DEVELOPMENT

STORMWATER MANAGEMENT REVIEWS: TYPICAL ITEMS MISSED IN THE APPLICATION SUBMISSIONS

- Section 303 – For all regulated activities that require submission of a formal Stormwater Management (SWM) Site Plan, both the Design Storm Method and the Simplified Method shall be calculated; the larger control volume based on the two calculations shall be controlled.
- Section 401.C - Provisions for permanent access and/or maintenance easements for all physical SWM Best Management Practices (BMPs) as necessary to implement the Operation and Maintenance Plan.
- Section 401.E.4 - The expected project time schedule shall be noted on the Post Construction Stormwater Management (PCSM) Plan.
- Section 401.E.5 - A Soil Erosion and Sediment Pollution Control plan, as prepared for and submitted to the approval authority.
- Section 407.A - The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM Site Plan.
- Section 501.D - The Operation and Maintenance Plan shall be recorded as a Restrictive Deed Covenant that runs with the land.

The above referenced Section Numbers were taken from the current Luzerne County Model Stormwater Ordinance in which most other Stormwater Management Ordinances for municipalities located in Luzerne County were based upon.

MUNICIPAL ENFORCEMENT AND PROCEDURAL SHORTCOMINGS RELATED TO APPROVED STORMWATER MANAGEMENT PLANS ASSOCIATED WITH LAND DEVELOPMENT SUBMISSIONS

- Whenever possible, typically for a commercial land development involving one (1) lot of record, construction can be completed under an approved Preliminary Plan. Once completed, the Final Plan for recording can be submitted and double as an “As-Built” Stormwater Management Plan, which is required by most SWM Ordinances. One thing that I have noticed over the years is that, when these plans are submitted, all of the stormwater structure and pipe data, such as rim and invert elevations, pipe slopes and lengths, ETC., are shown the same as they appeared on the Preliminary Plan. It is hard to believe that any contractor is that good. However, if the design Engineer’s Certification states that the plan represents and reflects all of the data as “As-Built” information, there isn’t much you can do about it with the exception of going through the expense of performing a separate as-built survey to confirm the data as being “As-Built”.
- When recording the Final “As-Built” plans, developers tend to only record the Cover/Signature Sheet and the Site Layout Plan due to the cost of recording on a per sheet basis. However, the “As-Built” SWM Plan should also be recorded to establish a permanent record of the SWM improvements. Many times, due to lack of space or technology, municipalities sometimes purge their paper hard copy files and such plans can be lost. Even design consultants sometimes only keep records for a certain number of years, only to purge both hard copy and electronic files.

E & S CONSTRUCTION ERRORS

- A common mistake made by developers is failure to have their contractors register with the Luzerne Conservation District as a Co-Permittee, whereas the Co-Permittee assumes the responsibility of implementation and maintenance of all soil erosion and sediment pollution control measures, whether the development is commercial or residential for the work that they are under contract for.
- In residential developments, the developer does not realize that after all of the public infrastructure improvements for utilities, stormwater management, sanitary sewage collection and disposal, roads, etc. are completed, it is the developer's responsibility to see that all of the individual home builders are registered as additional co-Permittees responsible for the implementation and maintenance of all soil erosion sediment pollution control measures on the individual lot on which they are under contract for, in order to protect and maintain those improvements constructed as part of the development's infrastructure, particularly, roadside swales and storm inlets. This also applies to the landscapers for an individual lot.
- In both of the previously described instances when a Soil Erosion and Sediment Pollution Control violation is cited, the responsibility to correct the deficiency and/or pay any applicable fine falls upon the last known registered Co-Permittee. In many cases, it turns out to be the developer.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECOMMENDATIONS

- In municipalities having curbed streets, sump pump discharges and roof leader extensions have over the years been constructed/installed to discharge out to and through the face of the curb. This was a common design and construction standard during the HUD Post-1972 Flood Infrastructure rebuilding process throughout the '70's and 80's for most of the municipalities located in the Wyoming Valley.
- In more rural areas where curb does not exist for the most part and Land Development Ordinances do not have provision to provide curbing, grass-lined, rock-lined and paved swales are dominant.
- Most SWM Ordinances and MS4 Manuals contain provisions to allow for the implementation of "Small Disconnects", which detail how sump pump and roof leader extension discharges can be disconnected from discharging into the mainline drainage gutter or swale, allowing the discharge flows to sheet flow across the grass areas of a lot through a longer flow path to assist in the filtering and elimination of pollutants from sump pump and roof leader extension discharges from getting into the MS4 System.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECOMMENDATIONS continued

- In connection with the above-described situations, municipalities have been reluctant to make this an across-the-board policy and require any of these types of discharges identified to implement the disconnect, even though there is evidence that the continued discharge is impacting the roadway infrastructure, and in some cases, creating a safety hazard. In rural areas where there is no curb and on the side of a street that has no swale, discharges are “Softening” up the subbase under the paved roadway, which eventually causes base failure and the pavement structure begins to crack and fail. In curbed areas where the gutter grade slope is less than 0.75%, the discharge freezes before it can flow to the nearest inlet. As the discharge continues, it freezes and begins to build up and eventually the ice build up can cross the full width of the cartway, not only creating a safety hazard, but causing the municipality to incur additional expense to remove the ice or otherwise perform remedial work to mitigate the safety hazard.
- One alternative to this dilemma would be to adopt a partial disconnect policy, which would require the disconnect should a property owner apply for a building permit to replace a roof and/or a rain gutter system on the existing structure. New building construction typically is required to install an on-lot SWM system and/or small disconnects at the time of construction. Disconnects for sump pump discharges could be required whenever the municipality is proposing a roadway improvement project. The owners of the sump pump discharge could be given advance notice of the upcoming project to allow ample time for them to complete the disconnect.
- The assumed reason for the municipalities’ reluctance to adopt and/or enforce such policies appears to be two-fold: (1) The distaste that the general public has for the mandated MS4 municipal participation that they refer to as the “Rain Tax”; and (2) Most of the property owners that would be subject to having to complete a “Disconnect” are registered voters.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECOMMENDATIONS continued

- The disconnects represent an additional expense to the property owner. Since a majority of them may already be paying for the mandated MS4 participation, they would be opposed to paying any additional costs related to the same. An alternative to this would be for municipalities to come up with a way to share the cost or pay for the disconnects in their entirety as a preventative measure to mitigate damage to their infrastructure, although this is a very debatable alternative.

MS4 MAINTENANCE

- MS4 Maintenance Procedures, typically outlined in each municipality's Annual MS4 Report must be followed at all times to minimize the impacts that the lack of routine maintenance will have on the overall purpose of the MS4 program.
- Aside from the obvious reasons for the maintenance of storm inlets, swales, etc., there are other reasons where routine maintenance can also be related to safety. I was involved in a significant storm event that had occurred, resulting in a stormwater detention basin that had overflowed the emergency spillway and caused downstream damage to property as well as covering the paved roadway at the peak of the storm event, creating a safety hazard. Based upon the basin design, this should not have occurred. Upon performing an investigation to analyze why the basin had overflowed the emergency spillway, it was determined that several objects (recreational beachball, soccer ball and other size balls) that most likely ended up in the basin from nearby adjacent properties, had blocked interior orifices of the outlet structure, preventing collected runoff from discharging at the rate that was intended. As the BASIN continued to fill up, the objects eventually moved away from the structure, allowing the runoff to begin discharging. Routine maintenance may have detected these objects and had them removed.

EXHIBITS

- SWM Ordinance Section 302 – Exemptions. Pages 13 & 14.
- SWM Ordinance Section 302 – Table III.1. Stormwater Management Requirements and Exemptions. Page 14.
- SWM Ordinance Section 303 – Volume Controls. Pages 14, 15 &16.
- SWM Ordinance Section 304 – Rate Controls. Pages 16 &17.