

WPAC COMMENTS ON THE COUNTY-WIDE ACT 167 PLAN
(Comment period closed August 31, 2012):

Draft Model Ordinance July 18, 2012 version

Comments received:

- **19** Chester County municipalities and **2** stakeholders submitted comments; some comments were submitted on behalf of more than one municipality.

MODEL ORDINANCE GENERAL FEEDBACK RECEIVED:

On behalf of X and X Townships, we have no additional comments relating to the County-wide Act 167 ordinance materials.

I found that my earlier comments had been addressed, often to a more eloquent degree than I had even suggested, thank you! The ordinance has improved greatly since the spring version.

Will each municipality have to submit their Ordinance to the Chester County Planning Commission for review prior to municipal adoption?

Sections requiring repetitive capitalization changes:

1. Stormwater Management Facilities – 103.M, 602.A.7, 701.A
2. Easement – 701.E, 702.A.10, 702.A.10.b, 702.A.10.c, 702.B.6, 704.A.8, 704.B.1-4, 704.B.6, 704.B.9, 704.B.11, 704.C, 704.C.1-3, 704.C.5-8, 704.C.11, 804.B
3. State / Federal – 106.A.2, Table 106.1, NPDES definition, 301.C.2, 301.S, 302.D (2 places), 402.A.2.e, 801.B.2, 801.F
4. Developer – in the Applicant definition
5. Channel – in the Intermittent Stream, Invert and Watercourse definitions, Section 309.C, 402.B.8.b
6. Throughout document do not capitalize the word “Site” when used as “Site Plan”
7. Subdivision & Land Development – capitalize in 404.A, 404.E, 404.F

I have reviewed the Chester County Model Stormwater Management Ordinance at your suggestion on behalf of X.

I have no comment with respect to the technical and engineering related provisions of the Model Storm Water Management Ordinance. However, I have some very basic conceptual and structural questions that I think should be considered by the County and/or its consultants in finalizing the model. For the most part these relate to the question of enabling authority under state law and the requirements and limits of that enabling authority. I will first address these in general terms and then highlight specific provisions which may benefit from clarification or change based on these concerns.

Conceptually, the Pennsylvania Storm Water Management Act directs municipalities to adopt or amend and implement "*...such ordinances and regulations, including zoning, subdivision and development, building code, and erosion and sediment ordinances, as are necessary to regulate development within the municipality in a manner consistent with the applicable watershed stormwater management plan and the provisions of this Act.* 32 P.S §680.11(b). So, right from the get go, the legislature seems to have directed the municipalities to use existing zoning, subdivision and land development, and construction codes to regulate stormwater management in the context of those respective activities, rather than to promulgate a stand alone "Stormwater Mangement Ordinance".

It appears, from the structure and content of the proposed Model, that it is not purporting to amend particular provisions of existing zoning, subdivision land development, construction or grading ordinances, but rather to act as a "stand alone" ordinance. There is some question whether, given Storm Water Management Act's direction to adopt and amend zoning, subdivision land development, and building and erosion and sediment control ordinances, the creation of a stand alone ordinance is even authorized by the Storm Water Management Act itself, given that other statutes independently setting forth the authority and parameters for zoning regulations, subdivision and land development regulations and building code regulations. And, where those other enabling statutes (the Municipalities Planning Code "MPC", as to zoning and subdivision/land development, and Uniform Construction Code as to building regulations) set forth specific procedures for administration, enforcement, fines and appeals, it is not clear that this stand alone Stormwater Management Ordinance may permissibly stray from those statutory zoning, subdivision and land development and construction code processes by fashioning new and different such processes for review, fines, enforcement and appeals.

Given this concern, some consideration should be given to rewriting the relevant model provisions relating to statutory authority in order to more clearly and directly state that the model ordinance regulations shall be deemed to supplement and amend the Municipality's existing subdivision and land development ordinance ("saldo") where the activity involved is either "subdivision" or "land development" under the MPC and to amend and supplement the existing zoning ordinance in all other cases. Since, under Article Six of the MPC, zoning ordinances may regulate flood plains, protect natural

resources, protect aquifers, and prevent loss of life or property from flood, and since the stated purposes of these Storm Water Management Regulations appear to be directed at these same regulatory concerns (see Section 102 of Model Ordinance) it would appear that the Storm Water Management Ordinance may be regarded as a "zoning" in any instance where it is not being applied to uses and activities which constitute, more specifically, "subdivision" or "land development" under the MPC. An advantage to creating this ordinance as an amendment and supplement to both the zoning and subdivision land development ordinances is that the enforcement and appeal processes for each are clearly and specifically laid out in the Pennsylvania Municipality Planning Code. The risk to not doing so is that the Storm Water Management Act does not establish procedures for enforcement notices, fines or appeals and by then "defaulting" to the Borough Code or to the Second Class Township Code as the case may be, a conflict is created between the civil penalties and fine amounts authorized under the MPC and the criminal penalties and fine amounts under the Borough and Second Class Township Codes for violations of housing, building and property maintenance ordinances.

By citing as the statutory enabling authority in the five (5) different statutes mentioned in Section 104 of the Model Ordinance, but then going on to create different enforcement and appeals processes from those laid out in certain of the enabling statutes reference (specifically from the MPC processes, and arguably even from the Borough and Township Code processes, there is an inherent conflict and platform for procedural confusion in the Model Ordinance and, perhaps, even grounds to challenge fines levied undedt.

Again all of these comments stem from a lack of clear authority or division of authority under relevant enabling statutes in terms of the process applied. By combining a citation to various statutes without a clear definition of which authority is being employed in a given context and without employing the statutory process required by such enabling authority, the model ordinance may be subject to confusion or challenge for the reasons stated. Redrafting to make the process more directly fall under the umbrella of a land use ordinance under the MPC may eliminate or significantly reduce those procedural concerns.

NOTES TO MUNICIPALITIES (PAGES 4 TO 6)

Page 5, Note 8. under Small Projects, Section reference to 40.2, should be 402.

ARTICLE I - GENERAL PROVISIONS

SECTION 102. STATEMENT OF FINDINGS:

Section 102 G. Do we include this provision in all communities since there is potential that the MS4 program will be expanded due to the 2010 Urbanized Area?

Section 102.H why specify municipal separate storm sewer systems. Non-stormwater discharges to any storm sewer system can contribute pollution...

SECTION 104. STATUTORY AUTHORITY:

Section 104. Statutory Authority. This section recites that the standalone Storm Water Management Ordinance is enabled by the authority contained in the Stormwater Management Act, the Borough Code, the First Class Township Code, the Second Class Township Code, and the Pennsylvania Municipalities Planning Code. As mentioned above, each of these enabling statutes have different, sometimes overlapping, and sometimes not coinciding, provisions regarding fines, enforcement and appeals. By citing to all of these statutes as the source of authority, but then creating an enforcement and appeals process not necessarily specifically tied to any of them, one might argue that in the enforcement and appeals processes stated are not properly authorized by the enabling statute authorizing oversight of the specific land use or activity which is actually being regulated in a given case.

As mentioned above some consideration should be given to more clearly reciting that the Stormwater Management ordinance actually supplements the municipality's existing zoning and subdivision land development ordinances in order to prescribe the stated storm water management planning and management requirements for subdivision and land development under the Saldo and for all other land uses and activities under the Zoning Ordinance. Such revision could, at the same time, still make clear that violation may also give rise to the nuisance classification and other remedies prescribed by the Storm Water Management Act without going, as was here done in the later discussed section, so far as to create a criminal enforcement process and fines different from those authorized in the civil enforcement and penalties provisions of the MPC.

Section 104, Third Class City should also be included.

SECTION 105. REGULATED ACTIVITIES:

Section 105 the title is not very descriptive of the criteria that follows. Applicability would be more appropriate. If need be use Applicability/ Regulated Activities

Section 105.2. [*sic*] 105.A.2. a grading permit may not be required in all Municipalities adopting this ordinance.

Section 105.C, the quotes can be removed from “parent tract” as that is a defined term.

Section 105.C consider splitting the opening paragraph. The first sentence would be 105.C.1 and everything from there on (after the parentheses) as 105.C.2.

Section 105c - How will the Townships fund the tracking of the accumulated cover on a parcel? How do we keep future owners informed?

TABLE 106.1. THRESHOLDS FOR REGULATED ACTIVITIES THAT ARE EXEMPT:

Table 106.1 for the bullet items below the table, “Legend” does not seem appropriate. Notes would be better.

Table 106.1 Legend the first bullet item seems out of place, and it is important. Could “regardless of size” be added to the end of Section 106.B.2?

Table 106.1 - Increase the amounts in column 4 to > 2,000 sq. ft. of impervious surface and > 10,000 sq. ft. of earth disturbance. The amounts in column 3 will also Increase accordingly.

SECTION 106. EXEMPTIONS AND MODIFIED REQUIREMENTS:

Section 106.C why list the exempt sections and articles rather than just referencing the table? It’s redundant and made me worry that something was different somehow.

Section 106.C.4 – Replace the existing language with the following: “Gardening – Use of land for gardening for home use or sales up to \$1,000.00 per year.”

Section 106.C.5 should read “25 Pa Code Chapter 102”

Section 106.C.6 why state that such operations must meet Section 303 – all of the other activities listed need to meet 303 but except for 106.C.7 each one doesn’t say so individually.

106. Section 7 & 8 need clarification. Small road widening project should not require stormwater management plan. Shoulder work should not require stormwater management plan.

Section 106.C.7 why state that such operations must meet Section 303 and exempt from others – all of the other activities listed need to meet 303 and are exempt from the others but each one doesn’t say so individually.

Section 106.C.8 should shoulder improvements and roadway be clarified? differences in interpretation of what these terms allow and where (especially when combined as “existing roadway cross-section”) have appeared when discussing with other engineers.

106. Section 9 & 10 need clarification. The replacement can be re-configured as long as the square footage remains the same.

Section 106.C.9 & 10 – In-Kind replacement of impervious surfaces in the exact same footprint is exempt. There are several questions and concerns about this exemption:

- a. The Board is concerned about global exemptions for impervious surfaces in the same footprint, particularly if a property already has known stormwater problems. They suggested these exemptions only be granted on a case-by-case basis after a recommendation by the Township Engineer; however they do not want to create an unnecessary burden on a resident, so this Township Engineer evaluation would be conducted without submission of any plans.
- b. What if a homeowner has an existing 1000 sf impervious surface (deck, patio, pool, etc.) that they want to replace, but the replacement is slightly larger or in a slightly different footprint? Assuming the ordinance applicability threshold is 1000 sf, is the intent that they would only have to comply with this ordinance if they had 1000 sf or more of the new surface outside the existing footprint? A couple examples that the PC expects will regularly be asked by residents and for which they would like clarification prior to ordinance adoption as opposed to interpretation by each municipality after the fact:
- c. The resident has a 1000 sf patio that they want to replace, but it’s in a slightly different footprint – Say 750 sf are within the original footprint

and 250 sf are different. They would not have to comply with the Ordinance or provide any stormwater controls since the impervious surface outside the existing footprint is less than 1000 sf?

- d. Alternatively, if the new patio is 1,500 sf with 500 sf in the existing footprint and 1000 sf outside that footprint, they would definitely have to comply, but would the “proposed impervious” for calculations be considered the entire 1500 sf or just the 1000 sf outside the existing footprint? The PC foresees this question coming up a lot by residents, and they would like it clarified in advance.

Section 106.D again, as in 106.C, why list the exempt sections and articles rather than just referencing the table? It’s redundant and made me worry that something was different somehow.

Section 106.D should the first reference to Appendix A use its full title and then put the short title in parentheses and after that not put Simplified Approach in quotes every time it’s used? that is: Simplified Approach to Stormwater Management for Small Projects (Simplified Approach) (Appendix A)

Section 106.D in the 7th line, after Engineer, add a semi colon.

Section 106.D Our Board of Supervisors and Planning Commission members discussed this issue at length as we were preparing our ordinance. We feel strongly that the thresholds for regulation should be 5,000 square feet of disturbance and 2,000 square feet net increase of impervious coverage. We also have a condition that, if the net square feet of impervious coverage is greater than 2,000 square feet but the increase in impervious coverage is less than 5,000 square feet, some regulation is required but with a simplified approach. The thresholds in your model ordinance are much lower.

We commend you for your hard work on this ordinance and especially for Appendix A.2, a Simplified Approach to Stormwater Management for Small Projects – Handbook.

X requests that you consider raising the thresholds to be similar or the same as our existing ordinance as outlined above.

The “simplified” approach for smaller projects is not simple enough – the tables provided are not clear and the information may not be understood by a lay person. The simplified approach needs further clarification for the typical homeowner/applicant to better understand the design and construction requirements.

As noted in prior X comments, the minimum threshold for applicability (1,000 square feet of impervious surface) is too low. A 2,000 square foot threshold would better allow

for conditions in a rural, non-MS4 municipality like X, and would further reduce the need to consider the simplified approach (which may be poorly understood by property owners) for smaller projects.

Section 106.E again, as in 106.C & D, why list the exempt sections and articles rather than just referencing the table?

Section 106.E. middle of the paragraph.. “Except as necessary to protect the public health, safety and welfare, should be deleted (not enforceable).

Section 106.E.5 It is not clear how this provision can be enforced if the activity is “Exempted”. The provision of 1” minimum retained requires design, review, and oversight.

SECTION 108. SEVERABILITY, APPLICABILITY:

Section 108.B why would this be under severability and isn't it basically the same as Section 109.B and C?

Section 108.B – do not capitalize the first “Ordinance”

Section 108.B and Section 109.B appear to cover the same points.

SECTION 109. COMPATIBILITY WITH OTHER ORDINANCES OR LEGAL REQUIREMENTS:

Section 109.C may be deleted if the Municipalities choose to insert design specifications for construction.

SECTION 110. FINANCIAL SECURITY:

Section 110 – Financial Security –This appears to impact road front lots. Clarification needed. If this is in the MPC, why is it needed here? If it stays, allow flexibility.

SECTION 111. WAIVERS:

- **Section 111. Waivers.** The waiver provisions here stated are consistent with those allowable under the MPC for activity constituting subdivision and land development. There is no such statutory enabling authority for "waivers" for activity not rising to the level of subdivision or land development which may be subject to stormwater management regulations under the zoning ordinance or, for that matter, under the other ordinances which municipalities are directed to adopt under the Storm Water Management Act. Rather, if this stormwater ordinance is regarded as regulating zoning, when not being applied in a saldo context, then the applicable standard would have to be the "variance" standard under article IX of the MPC, rather than the "waiver" standard under Article V of the MPC. Of course, at any time that a regulation permits "waiver", there is an opportunity for a challenger or disappointed applicant to contend that the ordinance is void for vagueness or has been arbitrarily or discriminatorily applied in a given case unless the basis and standards for granting or denial of the waiver are laid out in detail. Either the waiver provision should be applied only in instances where the activity being reviewed is subdivision or land development planning, or consideration should be given to: (a) including "variance" provisions for those situations where the subject matter is not subdivision or land development and therefore a "zoning" regulations; and/or (b) supplementing the waiver section for application to non-saldo situations by laying out more specific standards and criteria according to which such waivers may be entertained or granted. (See, by way of regulatory example in a different context, the Uniform Building Code sections whereunder the Code Official is authorized to allow "modifications" allowing different construction methods or materials achieving equivalent results provided that fire safety, accessibility, health and structural soundness requirements are not lessened.

SECTION 112. ERRONEOUS PERMITS:

Section 112 – Erroneous Permit – this is required for MS4 ordinance requirements and should be noted as such

ARTICLE II - DEFINITIONS

SECTION 201. INTERPRETATION:

Section 201.F – do not capitalize municipal

SECTION 202. DEFINITIONS:

Since agricultural activities are provided more flexibility, is the definition of “agricultural activities” strong enough to prevent abuse of this flexibility, i.e. for a homeowner or commercial business owner with a small property to claim a garden on the property allows them to be an “agricultural activity” and thereby allows them to comply with lesser standards?

Section 202 –

- Add a definition for “Runon”. Need to add a sub-section later that requires applicant to the extent practicable to route “runon” around the “regulated activity” or BMP drainage area to minimize the scale of the BMP.
- Add a definition for the “Water Quality Volume” that needs to be managed.

Definition comments:

- a. Ag Activity – should be “...planting or harvesting; pasturing and raising of livestock; and the installation ...
- b. BMP – should read “...and/or peak rate control...” and remove the comma after “practices and devices” and amend to read “...systems as well as infiltration facilities, ...”
- c. Between Detention Basin & Detention Volume there is an extra space
- d. E&S Plan – should read “...sedimentation that must be prepared...”
- e. Floodway - *Check FEMA definition*
- f. Freeboard – should read “...designated high water elevation and the elevation fo the top of a dam...”
- g. Governing Body – capitalize Council, etc
- h. /Grading – capitalize Swale and Site
- i. Hydrologic Soil Group – there’s an extra space within the definition
- j. Karst – groundwater should be one word for consistency
- k. Landowner – should read “...interest in the land”
- l. Maintenance – should this read “....any Stormwater Management Facility or system”
- m. New Development – should “grading” be capitalized
- n. Nonstructural BMP – either needs an add’l “)” at the end or eliminate the “(“ before “see”
- o. PennDOT – should be one word for consistency
- p. Point Source – possibly capitalize “Channel”, “State” and Swale

- q. Regulated Earth Disturbance – should this only reference Chapter 102 and not 92?
- r. Retention Basin – it is an incorrect statement to say that “they don’t have an outlet” – typically the bottom portion of the basin contains retention volume but the upper portion (higher) of the basin is utilized as a typical detention basin with an outlet structure; Perhaps state that retention/detention basins can be combined in one facility?
- s. SCS – should reference NRCS
- t. Separate Storm Sewer System – should this use the term Swale in the definition; possibly also capitalize Channel
- u. Stormwater – remove comma after precipitation or remove “or” before snow
- v. Stormwater Management Facility – should this reference structural BMPs?
- w. Top of Bank – capitalize Stream, Channel and Floodplain

- **Section 202. Land Development.A.**, recommend “or two (2)” is removed for redundancy.
 - **Section 202. Licensed Professional** –Registered Landscape Architect” should be removed from this list.
 - **Section 202. Retention Basin** – second sentence should be deleted. Even infiltration systems have some overflows as mandated later.
 - **Section 202. Stormwater Management (SWM) Site Plan** – in Appendix A, the Simplified Stormwater Management Plan is also abbreviated SWM. Should this include or exclude the Simplified method?
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ARTICLE III - STORMWATER MANAGEMENT STANDARDS

SECTION 301. GENERAL REQUIREMENTS:

Section 301 – Somewhere in this section the Ordinance should include a general requirement that up slope runoff should be safely routed around the drainage area to the BMP to minimize the scale of the BMP.

Sections 301.E & F. Delete “to the maximum extent practicable”

Section 301.F – waterbody should be one word for consistency

Section 301.G even though the matrix states that these are to be exactly as written -- the less stringent options require notification and explanation to “affected Landowner(s)” with no explanation of “affected”, while the mandatory section requires permission when existing drainage discharges are altered but doesn’t require notification and an explanation otherwise. These don’t seem consistent. FOLLOW-UP COMMENT DAYS LATER for Sections 301.G and 301.G.1: I miss understood the requirements and options when writing my previous comment regarding this section – ignore that; however, when looking at it again a different question comes up. For the first option for 301.G.1, when the municipality decides to include a less stringent provision for smaller projects (Simplified Approach) since projects that qualify for the Simplified Approach are exempt from Section 301 shouldn’t this requirement be included elsewhere if the municipality wants to require it?

Section 301.H – The reference to Title 25 of the PA Code is inconsistent with the way it is typically identified in the Ordinance (25 Pa Code)

Section 301.I – bypass should not be hyphenated

Section 301.K, [sic] 301.L. should the “outer zone” be more formally defined as “buffer”

Section 301.L – capitalize Wetlands, Riparian Buffer

Section 301.L in an ordinance where so many things are so specifically defined - in this section there’s a “treatment train” and “outer zone (filter strip)” and “wetland’s riparian buffer”. It seems there must be a broad brush way of saying this that doesn’t use semi-technical catch phrases.

Section 301 L – Clarification needed – better definitions for terms such as “treatment train, outer zone, and wetland’s riparian buffer”.

Sections 301.M, N & O – put a space after the heading – remove the hyphen for consistency

Section 301.O.4 – capitalize State, Carbonate Geology and Groundwater Recharge

Section 301.R – the word “Chapter” should be removed, capitalize Floodway & Floodplain

Section 301.S – also refer to Federal Permits

SECTION 302. PERMIT REQUIREMENTS BY OTHER GOVERNMENTAL ENTITIES

Section 302.C – capitalize Wetlands

SECTION 303. EROSION AND SEDIMENT CONTROL

Section 303.A.1.b – why are there “ “ around NPDES Construction activities?

SECTION 304. SITE DESIGN PROCESS

The revisions to Section 304 address my concerns about confusing the site design process for stormwater management with the conservation subdivision process that about a third of the Chester County municipalities have adopted in their Zoning ordinances.

Section 304. Delete “to the maximum extent practicable”

Section 304 – Another possible location to include something about routing up slope runoff around the BMP drainage area.

Section 304 opening paragraph needs a close parenthesis in the fourth line

Sections 304.A, B, and C, remove order reference (First, Second, Third).

Section 304.C.1 – layout is one word – no hyphen

Section 304.C.4 – capitalize Infiltration, Channel, Floodplain, Conveyance

Section 304.C.6 & 304.C.11 – capitalize infiltration

Section 304.C.10 – capitalize Stream and Channel

Section 304.C.12

But the large surface stormwater basins promoted by **Section 304.C.12 (Model Ordinance)** of the County-wide Act 167 Plan -- and being proposed for the Turnpike Widening and Richter Tract -- may bring an **even more lethal health problem** into Tredyffrin Township: avian flu that has mutated into a highly infectious form spread by migratory Canadian geese.

a) The ponds will attract large numbers of migratory geese away from their flight to the Chesapeake Bay and pull them instead into the Glenharding neighborhood. Every pond built in Tredyffrin so far has developed a geese problem.

- [Ref (1)] <http://www.tredyffrin.org/pdf/publicworks/Executive%20Summary.pdf> (scroll down to "Pond Sites")

b) It is illegal under federal law to kill or even harass the geese – in 2010 East Goshen Township had to pay the USDA \$3885 just to remove 130. [Ref (2)] <http://www.eastgoshen.org/wp-content/uploads/2010/09/09212010-BOARD-OF-SUPERVISORS-AGENDA-PACKET-DETAILS-B.pdf>

And those geese were not infected with a lethal virus.

b) [*sic*] The US Geological Survey and World Health Organization fear that migratory geese will be a likely transmission path for lethal avian flu if the flu mutates into a human-infectious form in densely populated Asia. Migratory birds from Asia fly to the Arctic in summer where they mingle with North American birds –which return here in the fall. Unlike airline passengers, geese can't be quarantined.[Ref (3) , Ref(4) , Ref (9)]

[3] <http://www.sciencedaily.com/releases/2011/03/110324153755.htm>

[4] <http://www.who.int/foodsafety/micro/avian/en/index1.html#wild> birds

[9] http://www.nwhc.usgs.gov/publications/other/Final_Wild_Bird_Strategic_Plan_0322.pdf

c) The federal government also sees import of Asian birds or bird products as a risk.

d) Dutch scientists recently demonstrated that only a few mutations will be needed to make lethal avian flu highly infectious to humans and trigger a pandemic. The US government tried to suppress this report for fear it could be used by terrorists [Ref (6)]

<http://www.guardian.co.uk/science/2012/jun/21/results-published-pandemic-h5n1-bird-flu>

e) Children who contract avian flu near the Tredyffrin ponds (geese feces, feathers etc.) will **carry it into Tredyffrin Easttown schools** and local shopping malls. [Ref (7) , (8)]

[7] <http://www.sciencedaily.com/releases/2010/08/100820115052.htm>

[8] https://help.cbp.gov/app/answers/detail/a_id/743/~bird-feathers-from-countries-afflicted-with-the-avian-flu

f) One question is **what liability lawsuits** can be levied against those who built or approved the ponds if children die.

4) To forestall Avian Flu and West Nile Virus pandemics, **Section 304.C.12** (Model Ordinance) of the County-Wide Act 167 Plan should be revised to **mandate that developers like the Turnpike and Richter Tract build large Underground Concrete Vaults instead of Surface Basins.** (The Turnpike is already planning to build several such vaults in the Valley Creek watershed but not in the Trout Creek watershed.)

On the state level, PADEP should examine whether the Turnpike needs to replace **all of its surface basins** with underground vaults.

Section 304.C.13.c. Subsurface structural BMPs are a preferred method of management in several municipalities, is this hierarchy mandatory?

Section 304.C.14 Conservation Design, Low Impact Design and Sustainable Design are listed with a reference to Appendix B but when you go there its Natural Hydrology Site Design with the others only mentioned in the last box of Table B.1. Why not use Appendix B's actual title in this section?

SECTION 305. WATER QUALITY AND RUNOFF VOLUME REQUIREMENTS:

305.A.B -

For Water Quality and Run-off Volume Requirements only, I recommend using the actual pre-development ground cover conditions for modeling purposes (or maybe 90% of actual pre-development conditions) rather than the ground cover assumptions presented in Subsection 309.D.

Changes in vegetative cover from a scrub growth cover (would have to assume woods in good condition) to lawn for a residential lot development results in extraordinary amounts of ground water recharge volume.

Section 305 – intro, capitalize State Water Quality Requirements

Re Section 305 "Water Quality and Runoff Volume Requirements", this section only addresses the 2 year volumes -- not the larger, more severe stormwater volumes for 5-year, 10-year, 100 year etc storms. Hence, it seems **that MORE severe flooding would be allowed** for the larger storms as much greater runoff from new large impervious surfaces (receiving e.g, 6 inches of rain) overflow small stormwater basins sized to only handle 3.16 inches of rain.

Such relaxed standards could eventually cause **heavy tax increases to be levied on**

Tredyffrin Township residents. In settlement of Clean Water Act lawsuits, the US EPA has moved to levy TMDL requirements on Impaired Streams like Trout Creek. [Ref (10)] <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/lawsuit.cfm>

If developers like the Turnpike do not install adequate BMPs now to restrict stormwater runoff, then Tredyffrin Township may have to add them to its MS4 storm sewer system sometime in the near future (2015 by one report, 2021 according to the Section 303(d) list on the PADEP website.)

Even maintaining the status quo is not enough. **With global warming, Pennsylvania will start seeing heavy "10 year storms" occurring more frequently**-- see the US Global Change Research Program's report on the recent major increase in Northeast precipitation (and their predictions of even heavier downpours in the future) at http://www.washingtonpost.com/blogs/capital-weather-gang/post/extreme-precipitation-in-a-warming-world-big-increases-already-in-northeast/2011/11/01/gIQAVxRdcM_blog.html

Yet for 1-year and 2-year storms, Section 305 of the County Plan only requires that the runoff from new development post-construction will not exceed the runoff that existed pre-development (while assuming low rainfall levels based on **obsolete NOAA rainfall data** from decades ago.) This **will not reduce flooding** in areas already partially or fully developed –it will make it worse.

Section 305.F – waterbodies should be one word for consistency

Section 305.F. The second sentence should be clarified, is this pre-treatment?

Section 305.J. and Section 306.H.– Allows areas and impervious surfaces outside the site may be excluded from calculations as to water quality, volume and infiltration. Areas and impervious surfaces outside the site may contribute to the volume and water quality of the site. To exclude the offsite contributions to the volume, at least, may set up the SWM structures on the site to fail. Is it prudent to not consider the inflows to a site in designing SWM structures?

SECTION 306. INFILTRATION REQUIREMENTS:

Section 306. The step-down requirement of infiltration volume should be clarified. How does the 0.5 inch relate to the mandatory 1"? Maybe D should be a subset of B, and E a subset of C?

Section 306.A it might be good to add the section reference to the end of this sentence
“...quality volume requirement of Section 305.A”

Section 306.D should refer to 306.B and C

Section 305.J. and **Section 306.H.**– Allows areas and impervious surfaces outside the site may be excluded from calculations as to water quality, volume and infiltration. Areas and impervious surfaces outside the site may contribute to the volume and water quality of the site. To exclude the offsite contributions to the volume, at least, may set up the SWM structures on the site to fail. Is it prudent to not consider the inflows to a site in designing SWM structures?

Section 306.I – there is a double colon

- 1) **Section 306.I**, there are two colons.
- 2) **Section 306. I.2.** Last sentence should start with “Standard Septic/Sewage”
- 3) **Section 306.J.1.** Add the second sentence; “A minimum depth of forty-eight (48) inches between the bottom of the BMP in a carbonate area.
- 4) **Section 306.K.1.** delete this section.
- 5) **Section 306.K.2.** delete “due to Site constraints;”
- 6) **Section 306.L.1.** when is this necessary? This should be clarified.

Section 306 L 1 – Clarification needed – define contamination – define need.

Section 306 L 3 – Define “safeguards”.

Section 306 T 2 – Define scarification – depth?

Section 306.T – should inspection ports be provided

SECTION 307. STREAM CHANNEL PROTECTION REQUIREMENTS:
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Section 307 A & B – These two sections should only apply to regulated activities with a disturbance > 1 acre. The pre-development 1-year runoff from small drainage is essentially 0 which means that the BMP will need to capture and retain/infiltrate the entire 2-year post-development runoff. This is overkill. Larger DA’s will generate some runoff during a 1-year storm and make it more practical to reduce the 2-year postdevelopment runoff to the 1-year pre-development level.

Section 307.A. delete the second period at the end of the sentence.

Section 307.B. Delete “to the maximum extent practicable”

SECTION 308. STORMWATER PEAK RATE CONTROL REQUIREMENTS:

Section 308.C – is this evaluate on an entire site basis or on a watershed basis?

Table 308.1 – For New Development Regulated Activities, can the municipality select to reduce the post-construction 10-year storm to a pre-construction 5-year storm if they feel the 10 to 10 is not stringent enough but that the 10 to 2 is too stringent given existing conditions within the municipality?

Re Table 308.1, these Peak Flow Rates will do little to nothing to reduce existing flooding in already developed areas like Trout Creek (column 3 Redevelopment), especially if erosion is used to justify post-construction rates for new development that are as bad as the predevelopment rates. This Chester County ordinance would allow (but not require) Township Supervisors to discard existing township requirements that are more stringent.

SECTION 309. CALCULATION METHODOLOGY:

Section 309 – All hydrograph calculations to be used to size BMP’s should be done using the Soil Cover Complex Method. Only conveyance systems should be designed using the Rational Method.

SECTION 310. OTHER REQUIREMENTS:

Section 310.A – need to define wet basin

Section 310A&G, add “as amended” to document references.

Section 310.B – spillway calculation should be based on the assumption of a blocked outlet structure

Section 310 E – Any required permits should be issued by FEMA.

Section 310 F – Any required permits should be issued by PennDot.

Re West Nile Virus control in **Section 310 (Other Requirements)** and the tradeoff between the benefits of surface stormwater basins versus the spread of deadly West Nile Virus from increased mosquitos, the cited Monroe County PADEP guidance (Appendix D) is not a peer-reviewed scientific study with empirical data (mosquito sampling) to support its conclusions -- it is merely a religious opinion that Mother Nature will handle the problem if we provide suitable habitat for the baby frogs. 1304 Americans have died from West Nile Virus-- --there is no cure --and the problem will likely grow worse in coming decades with the greater heat of global warming.

SECTION 311. OTHER CONVEYANCE AND SYSTEM DESIGN STANDARDS:
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ARTICLE IV - STORMWATER MANAGEMENT SITE PLAN REQUIREMENTS

SECTION 401. GENERAL REQUIREMENTS:

Section 401.B – should also reference other outside permits (Section 302)

Section 401 C – Clarification needed if approval is deferred until building stage. There may be some cases where conditional approvals should be permitted even though written approval for the SWM Site Plan has not occurred, or has been deferred.

SECTION 402. SWM SITE PLAN CONTENTS:

Section 402 –

- The ordinance should make a comment with regard to the acceptability of the 2' contours data available from the County GIS Department. I think it should be ok to use for the < 1 acre projects but not for the > 1 acre projects.
- The ordinance should make available the use of blanket easement for the < 1 acre projects and require more defined easements for the > 1 acre projects.

Section 402. The use of the Simplified Method includes an O&M agreement that is sufficient for small project, requiring Section 402.B. and 702.A defeats the purpose of the Simplified method since those sections require engineered drawings for design and as-built.

Section 402 its seems that almost all of the opening paragraph could all be included at other locations rather than all lumped together here as it is. The first sentence says that it shall include a general description of the project which is repeated as the first item (402.A.1) it would just need the “including items described in Section 304...” added to it. The second two sentences are plan items that should be listed under subsection A. The last sentence would be a general requirement that would go under 401. The second part of the first sentence states what a SWM Site Plan consists of - which is important - but in addition to calculations maps and plans, it needs to include supplemental documentation, or it could be reworded and just state “as defined herein”.

Section 402.A.2 split the opening paragraph. The first sentence is a list that could be on a plan while the remainder are letters/documents that would be separate correspondence – not on the plan or in the calculations.

Section 402.B – show stream buffers required by NPDES

Section 402.B.5 – recommend allowing overall plan at 1” = 100’ but detailed view at 1” = 50’ for disturbed area (difficult to construct off 100’ scale plan)

Section 402.B.8.a & f – capitalize defined terms, waterbodies is one word for consistency

Section 402.B.8.f.i is this the Chp. 93 designation? Include if so, or state where it is from.

Section 402.B.8.f.iv Drainages? What is being asked for here? This needs to be more clear/specific.

Section 402.B.8.f.g [*sic*] **402.B.8.g.** there are no “areas” associated with a PNDI. A “list of potential impacts and clearances received” would be better including a date since PNDI’s are only good for a limited amount of time.

Section 402.B.8.i - Location and elevation to which contour elevations refer. The datum used shall be a known, established bench mark.

Section 402.B.13.a – this should be a numbered item (ie 14), not a subsection “a”

Section 402.B.16 – can municipalities change this to 1’ include high/low points as necessary? For detailed grading plans, 2’ contours for proposed grading are often not sufficient

Section 402.C – between subsections 3 & 4 there’s an extra space

Section 402.F.3 – confirm use of ensure vs insure

Section 402.G & H – what about NPDES, General Permits, - should reference Section 302

Section 402.G this is a repeat of 302.A, 401.B, 402.A.2.d and 404.B (maybe others)

Section 402.H this is a repeat of Section 302.D and 402.A.2.c

SECTION 403. SITE PLAN SUBMISSION:

SECTION 404. STORMWATER MANAGEMENT (SWM) SITE PLAN REVIEW:

Section 404 suggest adding "... and Approval Procedures" to the title, then get rid of all of the items that aren't procedural but are repeats of requirements listed previously

Section 404.B again the same repeat as 402.G etc.

Section 404 E – What if there are only minor issues provide conditional approval -

Section 404.F this is a condensed version but the same as 302 and 402.A.2

Section 404.G repeat of 401.C

Section 404.H – should read "inserting e.g., five (5)" and it calls for municipal signature, but signature block is not required in plan specifications. There are no procedures for municipal signatures if it is not a Subdivision/Land Development Plan

Section 404.J – include specific reference to revised calculations (as necessary) to be provided with the as-built

Section 404.J this seems out of place. Section 404 is titled SWM Site Plan Review but this subsection discusses the As-built Plan. This is all covered under Article V, no need to have it here possibly causing confusion.

SECTION 405. REVISION OF PLANS:

Section 405 except for subsection B, there is not really any difference between a revision and a resubmission. Why not combine and have 405 be Revision and Resubmission of a SWM Site Plan and 406 be Revision of an Approved SWM Site Plan.

SECTION 406. RESUBMISSION OF INCONSISTENT OR NONCOMPLIANT SWM SITE PLANS:

ARTICLE V - PERFORMANCE AND INSPECTION OF REGULATED ACTIVITIES, AND FINAL AS-BUILT PLANS

SECTION 501. PERFORMANCE AND INSPECTION OF REGULATED ACTIVITIES:

Section 501 should there be a section that states that when BMPs Conveyances are part of an approved subdivision or land development for which there is a developers agreement and financial guarantee per the SALDO that all construction and inspections shall be in accordance with the procedures of the SALDO and developers agreement

Section 501.C the first sentence is a repeat of 401.D. It fits better here, but why have it combined with the second sentence which could be its own subsection.

Section 501.D, remove “A final inspection of all constructed” and replace with “Inspections of constructed”.

SECTION 502. FINAL AS-BUILT PLANS:

Section 502 again, as with the above shouldn't there be a section that states that when BMPs Conveyances are part of an approved subdivision or land development for which there is a developers agreement and financial guarantee per the SALDO that As-Built Plans shall be in accordance with the procedures of the SALDO and developers agreement

Section 502 –
For < 1 acre projects, the design engineer should be able to just submit a certification that the BMP was installed per plan. For > 1 acre then an as-built plan should be submitted.

There is a conflict between **Section 502.F.2** and **502.G**. I would recommend keeping F.2 since as-builts are not usually completed for larger subdivisions, phased projects, etc before the first permits are issued. There can also be issues with stabilization due to seeding seasons, required minor revisions, etc.

ARTICLE VI - FEES AND EXPENSES

Article VI this whole article could be split to say that anything that is part of an approved subdivision or land development for which there is a developers agreement and financial guarantee, fees shall be per the fee schedule for subdivision and land development; otherwise, fees will be per the schedule as provided for SWM Site Plan Submittals

SECTION 601. MUNICIPALITY SWM SITE PLAN REVIEW AND INSPECTION FEES:

SECTION 602. EXPENSES COVERED BY FEES:

Section 602.A.2 seems that Engineer needs to be inserted between Municipal and and

Section 602.A.2 – should read “by the Municipality, the Municipal Engineer, and other municipal consultants, as applicable.”

ARTICLE VII - OPERATION & MAINTENANCE RESPONSIBILITIES AND EASEMENTS

Article VII - This article contains operation and maintenance requirements. We recommend that ongoing inspections be required on a regular basis (e.g. annually, bi-annually, etc.), that the reports be submitted to the municipality and that they contain pictures for comparison from one report to the next.

ARTICLE VII – The SW plan should be set up initially to contain all design details & specifications, O&M procedures, and the O&M agreement. When the as-built is done, it can be recorded on the original SW plan as redline comments. When the as-built is completed, this document can be signed and notarized by owner and then recorded. Everything in one nice tidy document.

SECTION 701. GENERAL REQUIREMENTS FOR PROTECTION, OPERATION AND MAINTENANCE OF STORMWATER BMPS AND CONVEYANCES:

SECTION 702. OPERATION AND MAINTENANCE PLANS:

Section 702.A.1 change to “identification (owner name/address, property address and tax parcel number).”

Add notes that Section 702.A.10.a must match Sections 402.B.17.c.v and 704.A.2

Section 702.B – the term “individual” should be replaced with “person” for consistency

SECTION 703. OPERATION AND MAINTENANCE AGREEMENTS:

Section 703.A.1 – change “Shall be between...” to “Be between...”

Section 703.A – should also be executed by Landowner

SECTION 704. EASEMENTS AND DEED RESTRICTIONS:

Section 704.B.8 – this seems to indicate that the municipality will record the document
Timeline for recording differs in sections 704.A.9, 704.B.11, 703.C.11 and 704.D.7;
Should specify a number of days perhaps?

SECTION 705. OTHER POST-CONSTRUCTION RESPONSIBILITIES:

Section 705 – use “person” in lieu of “parties” for consistency

Section 705.D – for second owner – should it clarify BMP owner?

SECTION 706. MUNICIPAL STORMWATER CONTROL AND BMP OPERATION AND MAINTENANCE FUND:

Section 706.D & E appear to be repetitive of 706.A

ARTICLE VIII - PROHIBITIONS

SECTION 801. PROHIBITED DISCHARGES:

Section 801 C – Delete springs & all sumps.

Section 801.C – compare to MS4 checklist

SECTION 802. PROHIBITED CONNECTIONS:

SECTION 803. ROOF DRAINS AND SUMP PUMPS:

SECTION 804. ALTERATION OF BMPS:

ARTICLE IX - ENFORCEMENT AND PENALTIES

SECTION 902. RIGHT-OF-ENTRY:

Section 902.C – define notification

SECTION 903. ENFORCEMENT:

Section 903.C – misleading and inconsistent with DEP NPDES requirement that the applicant must have an engineer certify the installation – municipal inspections are just as they see fit and owners do not always contact municipality for inspections

Section 903.E & F these should be combined

Section 903. Enforcement. This section sets out the required content and form of an enforcement notice. If the model ordinance is revised to be a supplement and amendment of a municipality's existing zoning ordinance and saldo, then this section needs to be carefully reviewed to ensure that it is consistent with and contains all information required by Section 616.1 of the MPC insofar as it regulates non-saldo activity.

Section 903.G – in the 3rd line, “these violations(s)” should be changed to “the violation(s)”

SECTION 904. SUSPENSION AND REVOCATION OF PERMITS AND APPROVALS:

Section 904.C.1 revise to read “...hazard, nuisance, or pollutions.”

SECTION 905. PENALTIES:

Section 905.C this doesn't really seem like a penalty, seems it would fit better under 902

Section 705. [sic] Penalties. This section establishes fines of up to \$1,000.00 recoverable in accordance with the procedures for enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure. If this model Ordinance is not clarified to be supplement to the zoning ordinance and saldo, then this process and fine are, both under the Borough Code and the Second Class Township Code, limited to \$600.00 rather than the stated \$1,000.00, for violations of other than "building, housing, property maintenance, health, fire or public safety, or for water, air and noise pollution violations." Arguably, the Stormwater Management Ordinance might be regarded, in part, as a water pollution ordinance, although that certainly would depend on the context, but if it is not so regarded, then the fine amount would have to be changed to \$600.00 (absent any clear authority in the Stormwater Management Act itself to even levy fines for violations). Also, it should be noted that under the Second Class Township Code, these proceedings are *civil*, and not *criminal*, as stated in this Model Ordinance, except, again, in those instances pertaining to violations of building, housing, property maintenance, health, fire or public safety, or water, air and noise pollution codes. Again, in finalizing these fine assessment and collection provisions, careful consideration of the context will be required to determine whether the applicable fine and enforcement proceeding is \$600.00 or \$1,000.00 and whether it is civil or criminal civil or criminal, if the above suggested citation to the MPC enabling authority is not made explicit here and implementation of \$500 civil penalties structure laid out in the MPC is not used instead of the \$1000 criminal summary offense process contained in the model ordinance.

A variation from in resorting to the MPC as the specific enabling authority, and the classification of all violations as being zoning or saldo violations, would be to allow for a separate category of violations relating solely to grading or erosion and sediment control violations where the activity at issue is neither land use regulated by the zoning ordinance or subdivision or land development regulated by the saldo.

Section 905.A – does Magisterial District need to be capitalized? Honey Brook Township

SECTION 906. APPEALS:

Section 906. Appeals. Section 906 is arguably directly at odds with Section 909.1(a)(9) of the MPC. The latter MPC section says that any appeals go to the zoning hearing board (rather than the governing body), if they are from the determination by the municipal engineer in the administration of any land use ordinance or provision thereof with

reference to sedimentation and erosion control and stormwater management insofar as they do not relate to development involving Article Five V or VII application. Therefore, strictly applying this provision of the MPC (which is itself one of the enabling statutes cited in the model ordinance), determinations by the municipal engineer under this ordinance go to the zoning hearing board and not to the municipal governing body in any case where the activity does not rise to the level of subdivision or land development. In all other instances, under the MPC, the appeal would go to the governing body pursuant to the authority set forth in Section 909.1(b)(6) dealing with determinations by the municipal engineer relating to storm water management or erosion and sediment controls in a subdivision or land development context.

APPENDICES

APPENDIX A. Simplified Approach to Stormwater Management for Small Projects

The “simplified” approach for smaller projects is not simple enough – the tables provided are not clear and the information may not be understood by a lay person. The simplified approach needs further clarification for the typical homeowner/applicant to better understand the design and construction requirements.

Appendix A - the abbreviation for Simplified Stormwater Management Site Plan should be (SSWM).

Appendix A – Simplified Approach ...

The previous draft had given two specific examples (approaches) that could be used as the Simplified Approach and had stated that the municipality could develop its own. This draft does not include this in the Notes to Editor and the Matrix of Minimum Mandatory Ordinance Standards states that Appendix A must be included exactly as written. In our experience with Act 167 Ordinances in other Counties, simplified approaches were developed, included and approved by DEP, and it is not clear why these could not be adjusted to design for the first 1 inch of rainfall and be used instead.

Appendix A Comments

1. Can the handbook be revised at the municipality’s discretion?
2. Appendix A, Applicability – 2nd bullet & Handbook introduction 1st paragraph & handbook Section 1 first sentence – revise to read “...not required to submit a formal stormwater plan...”
3. Appendix A – Submittal & Approval Requirements (also in Handbook) – 2nd bullet change “as defined by” to “as required by”
4. Appendix A – Submittal & Approval Requirements (also in Handbook) – 4th bullet change to read “...a final inspection to be conducted by...”
5. Handbook Intro 1st paragraph – there’s a double comma after infiltration
6. Simplified Approach can be used for areas of 1000-2000 SF – therefore tables 1-3 should be updated to include these areas
7. Simplified Approach – add TPN to worksheet for reference
8. Definition of “Impervious Surface” has a double period at the end
9. There is an extra space between the percent void volume and pervious surface definitions
10. Figure 3 – the label and picture are on different pages and picture isn’t dark enough or clearly printed
11. Dry Well, Bullet 7 needs a space between connected and infiltration and storm and sewer

12. Figure 5 – make the picture on left larger to read the text
 13. In the example, it is not clear why no SWM is necessary for only 400 SF (note – step 2)
 14. In Figure 6, site plan, the trench size (length, depth, etc) varies between plan and BMP #2 callout; Correct inconsistency in cistern/rain barrel size too
 15. In Table 7, the stream is greater than 50’ away
 16. Section 5, 2nd paragraph – should be signed and notarized – same for A.3 of sample agreement, 2nd paragraph
 17. In the Agreement title, remove comma after and
 18. Conveyance – states “man-made” but includes stream channels
 19. On O&M bioretention in the agreement – note removal of invasive species
 20. Better construction details (larger scale) with blanks to fill in dimensions, materials, specify cleanouts/inspections ports, etc should be provide (see attached detail)
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APPENDIX B. Site Design Process

My only outstanding concern is a small one regarding **Appendix B**.

Section 304 C. 14 refers the reader to Appendix B for more information on “conservation design,” “Low Impact Design,” and “Sustainable Design.” Those three terms are addressed three times in page B-3 and in Table B1. I still find it confusing, that page B8, refers to “Low Impact Cluster or Compact Development.” I believed that the three earlier references were to conservation design, meaning compact development surrounded by open space. If so, the title on page B8 might read, “Compact Development or Conservation Design.” The term “Low Impact Cluster” is not a term of art I am familiar with in planning circles, nor is it listed in the chart or text or anywhere else in the document. (As an aside, I don’t see much written on what is meant by “sustainable design” but that might be opening too large a discussion this late in the process!)

END

