

July 16, 2007

Mr. Stuart J. Lieberman, Esq.
Lieberman & Blecher, P.C.
10 Jefferson Plaza, Suite 100
Princeton, NJ 08540

*Scientists, Engineers &
Environmental Planners
Designing Innovative
Solutions for Water,
Wetland and Soil
Resource Management*

Sent by email only: sliberman@liebermanblecher.com

Re: Christopher Estates Subdivision
Block 1504, Lot 1.02
Hamilton Township, Mercer County, NJ
Princeton Hydro Project No. 527.006

Dear Mr. Lieberman:

Thank you for your inquiry as to whether deficiencies remain relating to the above referenced application. It is important to realize that when this plan was considered by the Hamilton Township Planning Board, the Stormwater Management Rules were in effect through the Residential Site Improvement Standards (RSIS), NJAC Title 5, Chapter 21, subchapter 7. In reviewing the Christopher Estates plans dated January 18, 2005, last revised August 9, 2005 (confirmed with Michael Guhanik, Land Use Coordinator of Hamilton Township on July 12, 2007 that these were the most recent plans) and "Revised" Stormwater Management report dated August 1, 2005, both by John Di Memmo, P.E. I found the following inconsistencies with State of New Jersey Stormwater Rules (NJAC 7:8) and RSIS standards. My following professional opinions are for your consideration:

1. There was no site specific soil testing performed to support the infiltration basin design, as required by the New Jersey Stormwater Best Management Practices Manual (BMP Manual, referenced by NJAC 7:8), Chapter 9.5, page 9.5-9. The engineer incorrectly used the Mercer County Soil Survey permeability range. The engineer also did not follow the Best Management Practice Manual that requires a 1/2 reduction of the determined infiltration rate, as discussed on page 9.5-4. Also, the depth to seasonal high water table is important in terms of the functioning and groundwater separation requirements in the Design Criteria, A. found on page 9.5-2. The engineer has failed to prove that the system will function and meet the requirement of the stormwater rules for recharge. A failed system with standing water has breeding mosquito implications. This duty to test is extremely fundamental and without this testing there is no way that this system can be considered compliant with the stormwater regulations.

Princeton Hydro, LLC

■ 1108 Old York Road PO Box 720 Ringoes, NJ 08551 t. 908.237.5660 f. 908.237.5666
□ 1105 Laurel Oak Road Suite 136 Voorhees, NJ 0803 t. 856.346.0060 f. 856.346.0065
□ 120 East Uwchlan Avenue Suite 204 Exton, PA 19341 t. 610.524.4220 f. 610.524.9434

www.PrincetonHydro.com

2. In the runoff calculations, the New Jersey Stormwater Best Management Practices Manual, Chapter 5, page 5-12, requires the engineer to separate the impervious from pervious for runoff. The engineer did not do this and used a composite Curve Number. The engineer has underestimated the runoff post-development and may have undersized the basin as a result. Failing to correctly calculate the amount of pre-development and post-development runoff is a fundamental flaw, which of necessity results in a conclusion that this proposal fails to satisfy state stormwater requirements.
3. The applicant did not submit a Low Impact Development checklist. The requirement for the submission of the assessment of the applicability of non-structural best management practices and preparation of the Low Impact Development checklist is detailed in NJAC 7:8-5.3 and Appendix A of the BMP Manual. The design has no components contributing to a Low Impact Development. And, therefore, does not satisfy state stormwater regulations.
4. The minimum top width of the infiltration basin berm, as required by RSIS, under NJAC 5:21-7.8(d) 4. ii (4), is required to be six (6) feet. The design on the plan and detail is deficient. And, therefore, does not satisfy stormwater management regulations within RSIS.
5. There are no water quality volume calculations provided to show that the water quality design storm is contained below the lowest outlet of the basin. If any water from the water quality design storm leaves the basin through the outlet structure, the 80% TSS rating of the infiltration basin is not met. Also, from page 9.5-3 of the BMP Manual,

To enhance safety by minimizing standing water depths, the vertical distance between the basin bottom and the maximum design storm water surface in surface infiltration basins should be no greater than 2 feet.

With my concern of this basin failing and the lack of a designed water quality volume elevation, the above requirement is particularly critical. And, therefore, does not satisfy state stormwater regulations.

6. The applicant submitted a Stormwater Operation and Maintenance Manual for the infiltration basin, required under 7:8-5.8. The date of this document is August 1, 2006. Page 9.5-7 of the BMP manual is clear that clogging will happen and attention to this condition is most necessary. I don't know how this was addressed since I don't have a copy. The OPRA request on February 26, 2007 asked for "...any documentation related to the approval of the Final Stormwater Management Plan..." It is clear, even without reviewing the Manual that the design does not incorporate the recommended pretreatment, found on Page 9.5-10, and the basin is very susceptible to frequent clogging. And, therefore, does not follow the recommendation in the BMP manual.

7. The pipe capacity in the receiving storm sewer in Evelyn Avenue should have been studied since the basin discharges to this network. RSIS under NJAC 5:21-7.8(d) 4. ii requires the designer to consider the basin operation during the 100-year storm. The connection to the existing storm sewer is not a free discharge and understanding of the flow in this system is critical to the functioning of the basin.
8. Regarding the jurisdiction for the review of this application under the stormwater rules, the Planning Board was the only body charged with this task. I checked with the Mercer County Soil Conservation District and the NJDEP (correspondences attached). Also, on NJDEP's website under Stormwater Management Rule, Frequently Asked Questions (http://www.nj.gov/dep/watershedmgt/stormwaterfaqs2.htm#3_10):

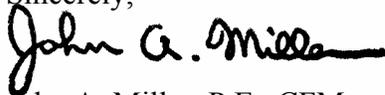
3.12 Do projects approved by the local Soil Conservation District automatically comply with these rules?

Reviews conducted by the local Soil Conservation Districts are typically limited in scope to the application of proper soil erosion and sediment controls during construction. Therefore, a Soil Conservation District approval does not automatically demonstrate compliance with the Stormwater Management Rules.

The Hamilton Township Planning Board should never depend on an outside agency to review compliance with the Stormwater rules, the RSIS, the Township's Stormwater Management Plan and the Municipal Stormwater Control Ordinance. In this case, there is no evidence that any outside agency has reviewed the stormwater plan despite representations by the applicant before the planning board that an outside agency review did occur. Proper stormwater management review is a requirement of the Township's Tier A Municipal Stormwater General Permit No. NJ0141852, under F. 3. a. iii of the permit.

I would be happy to discuss the above with you at your convenience. Thank you.

Sincerely,



John A. Miller, P.E., CFM
Water Resources Engineer
Certified Floodplain Manager

attachements

William F. Brash Jr., Mercer County Soil Conservation District email
Ms. Tracy Shevlin, NJDEP email

c: Andrew J. Chamberlain, Esq., by email: AChamberlain@LiebermanBlecher.com
file

John A. Miller

From: mercersoil@aol.com
Sent: Friday, July 06, 2007 4:44 PM
To: jmiller@princetonhydro.com
Subject: Re: Christopher Estates

Dear Mr. Miller,

In response to your inquiry, the Mercer County Soil Conservation District does not review development projects for compliance to NJDEP rules and regulations. The District reviews development projects for compliance to the Soil Erosion and Sediment Control Act, NJSA 4:24.

Should you have any questions or require any additional information do not hesitate to contact me.

William F. Brash Jr.
Director
Mercer County SCD
508 Hughes Drive
Hamilton Square, NJ 08690
P:609586.9603
F:609.586.1117
E:mercersoil@aol.com
W:mercerscd.org

-----Original Message-----

From: John A. Miller <jmiller@princetonhydro.com>
To: MercerSoil@aol.com
Sent: Fri, 6 Jul 2007 4:08 pm
Subject: Christopher Estates

Mr. Brash:

Thank you for our conversation this afternoon concerning your District's review of the subject project. I have attached excerpts from the February 22, 2007 transcript of the Hamilton Township Planning Board.

Can you confirm for me that your jurisdiction falls under Chapter 251, P. L. 1975, the Soil Erosion and Sediment Control Act to review Soil Erosion and Sediment Control Plans designs for compliance? I am looking to clarify that you do not review for compliance with NJAC 7:8 the Stormwater Management Rule (acknowledging that some design aspects have overlap within the scope of your review).

Please clarify for me whether you review "...to determine if you comply with the DEP...."

I very much appreciate your time in replying to this email.

Sincerely,

John A. Miller, P.E., CFM

7/15/2007

Water Resource Engineer
Licensed in PA, NJ, NY, DE & ME
Certified Floodplain Manager
jmiller@princetonhydro.com

Princeton Hydro, LLC
Scientists and Engineers
1108 Old York Road
Suite 1, P.O. Box 720
Ringoes, NJ 08551
ph: 908.237.5660 x 116
fx: 908.237.5666
princetonhydro.com

AOL now offers free email to everyone. Find out more about what's free from AOL at AOL.com.

John A. Miller

From: Tracy Shevlin [Tracy.Shevlin@dep.state.nj.us]
Sent: Monday, July 09, 2007 10:34 AM
To: jmiller@princetonhydro.com
Subject: Re: Christopher Estates - TWA 04-0606

John, A stormwater review is not part of the TWA review process. However, I checked with the Department's stormwater people (Bureau of Nonpoint Pollution Control) who informed me that stormwater reviews are done at the municipal level. The Department's review oversees the municipal stormwater plan and is not project specific for projects discharging to a POTW. Therefore, they suggested you check with Hamilton Township.

If you have any further questions, please let me know.

>>> "John A. Miller" <jmiller@princetonhydro.com> 7/6/2007 2:17 PM >>>
Ms. Shevlin:

I would like to know if the referenced project received a stormwater review by NJDEP. If you could respond with that information, I would be most grateful. If there is someone else that I should contact at NJDEP for confirmation, please let me know.

Thank you,

John A. Miller, P.E., CFM
Water Resource Engineer
Licensed in PA, NJ, NY, DE & ME
Certified Floodplain Manager
jmiller@princetonhydro.com

Princeton Hydro, LLC
Scientists and Engineers
1108 Old York Road
Suite 1, P.O. Box 720
Ringoes, NJ 08551
ph: 908.237.5660 x 116
fx: 908.237.5666
princetonhydro.com