

Date: Sun, 11 Jan 2009 18:33:42 -0500  
From: mikepries@verizon.net  
Subject: Re: Review of HRG Stormwater Management Study  
To: steventodd@hotmail.com

Thank you Steve - very in depth and interesting input.

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

From: Steven Todd  
To: mikepries@verizon.net ; cabruzzo12@comcast.net ; kfedeli@paonline.com ; amemmi@dauphinc.org ; gporter14@comcast.net  
Sent: Friday, January 09, 2009 8:09 AM  
Subject: FW: Review of HRG Stormwater Management Study

Supervisors:

I sent this to your twp emails last night. I just wanted to make sure it went through.

Thanks,

--Steve

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From: steventodd@hotmail.com  
To: mikepries@derrytownship.org; georgeporter@derrytownship.org; chrisabruzzo@derrytownship.org; kellyfedeli@derrytownship.org; skipmemmi@derrytownship.org; derryeacinterest@googlegroups.com  
Subject: Review of HRG Stormwater Management Study  
Date: Fri, 9 Jan 2009 03:58:55 +0000

Dear Supervisors:

First let me say thank you for unanimously appointing me to the UCC Board. I am honored to have the opportunity to serve my fine Township.

Please find a review of the July 8, 2008 Herbert, Rowland & Grubic, Inc. Derry Township, Stormwater Management Study. The Study is very comprehensive and professionally done. My concern is to ensure whatever we do to fix our storm problems will strike that ever-elusive balance between our safety, environmental protection and protection of our wallets.

I am concerned, and have heard others voice similar concern, that it seems as if the only option really looked at in every case was a big pipe. There are some areas where this is the only solution, or at least will have to be part of the final fix. I would like to make sure we have done all we can to allow for treatment and detention, where it is at all feasible. To this end, I offer several suggestions, as both a taxpayer and stormwater professional. There are 6 other concerns, list last, which we will want to look at also.

Thanks again, and I'll see you all next Tuesday for HRG's next update.

Your neighbor,

Steve Todd

The citation of the HRG report is preceded by HRG and Page #.; my comments are preceded by ST:

HRG Page ii-1: The frequency of storm events that cause problems appears to be increasing. Causes of this increase in frequency of problems can be attributed to...a reduction in the use of groundwater for water supply.

ST: Please explain how this affects the frequency of flood problems.

HRG Pages ii-2&3: However, these flood control detention facilities would most likely be classified as high hazard dams by the Pennsylvania Department of Environmental Protection due to the level of development downstream of their locations.

ST: Why would they be any different than other detention basins? Aren't "Dams", such as those regulated by Chapters 404 and 105, obstructions in waterways? Detention would have several advantages we need to look further at: 1) they would allow water quality treatment. 2) They might positively affect downstream flooding by depeaking flood rates, 3) they would certainly be far less expensive - both in material costs, and in implementation - than long runs of large diameter pipes.

HRG Page ii-3: It is expected that the cost of these impoundments (detention facilities) would be much greater than the solutions that have been recommended in this report (enlarging pipes and channels) for these problem areas...

ST: I don't think this is necessarily the case. These costs must be looked at closer.

HRG Page ii-3: We have considered this condition with respect to the drainage paths in the vicinity and downstream of the problem areas and feel that the recommended solutions will not cause problems within the identified system drainage areas. There could be an increase in the rate of discharge from these systems into Swatara Creek. However, it is felt that the level of increase in peak discharge from these systems would be minor in comparison to the total flow in Swatara Creek.

ST: Do we have to document this research? If we purposely introduce faster conveyance, are we sure no one downstream can claim damage?

HRG Page iii-1: PROBLEM AREA NO. 1 – MILL STREET / CHERRY DRIVE STORM SEWER SYSTEM. Our recommendation for this problem area is to install a new storm sewer parallel to the existing storm sewer...60 inches from Route 422 to the quarry outfall....This problem area would require significant coordination between the various affected property owners, utility companies, PennDOT, and Norfolk Southern Railroad.

ST: Have we considered detaining some - or all - of the runoff which exceeds existing capacity on the lands of the former Police and Township Bldgs? This is the natural low point, the Twp might already have ownership stake in the land, and future development is almost a given. The future developer could be asked to cooperate/contribute. If doing this could eliminate work in others' Rights-of-Way, it might lead to decreased lead time from design to execution. This quicker "shovel-ready" time is the prerequisite to applying anticipated Obama Stimulus funds. It would also allow for water quality treatment prior dumping directly into the Quarry.

ST: Have we considered asking the HMC to cooperatively allow some additional storage on their lands, prior to the Greenlea leg of this system? There are well-documented, destructive incidents here, and detaining this water prior to its reaching critical levels might help in other unforeseen ways (downstream velocities, for example). It looks like a lot of parallel pipe, for what should be a manageable amount of flow (south of SR0322, across from Greenlea).

HRG Page iii-4: PROBLEM AREA NO. 2 – COCOA AVENUE SYSTEM. Further investigation must be conducted to evaluate the capacity of the downstream channel to ensure there will be no increase in flooding in the park, especially near the pool and ball fields.

ST: Might this be moved to Priority #1? This is the area in which numerous folks were removed from their homes, and I believe their homes might have been condemned.

ST: Might there be potential for storage and detention in the farm fields east of Cocoa (SR0743), south of Governor (SR0322)? If doing this could eliminate work in others' Rights-of-Way, it might lead to decreased lead time from design to execution (quicker "shovel-ready").

ST: The ballfield referenced is, I believe, a constructed flood control facility, with existing outlet control structures. Might alterations in this area help with channel degradation?

ST: There is a ball field upstream, southeast of the Problem Area, on or near Glenn Road/Drive(name??). I am certain this is a manufactured flood control structure, with existing outlet control devices. Existing capacity therein should be investigated, to store flood waters prior to the SR0743/SR0322 intersection.

#### HRG Page iii-7: PROBLEM AREA NO. 3 – MILL ROAD UNDERPASS

ST: There is a resident who contacted Buchart Horn while we were exploring this. I forget the persons name, but this person claimed to have helped with some municipal mapping in the past. He had much knowledge of the area in question, and might have valueable insight.

HRG Page iii-10: PROBLEM AREA NO. 4 – COCOA AVENUE BETWEEN ELM AND AREBA AVENUES. The recommended system would be approximately 2,960 feet long and would be comprised of 24 inch diameter pipes. The system would run under Cocoa Avenue from Elm to Areba Avenues with branches on Maple and Cedar Avenues.

ST: It appears that the area directly upstream (feeding this system) might be the field/flood control structure which is affecting PROBLEM AREA NO. 2 – COCOA AVENUE SYSTEM. This doubles the reasons to look at this field as a control measure; we might effectively improving two seemingly different problem areas, with possibly less new conveyance pipes.

HRG Page iii-13: PROBLEM AREA NO. 5 – FOREST AVENUE, CLARK ROAD AND SAND HILL ROAD. It is recommended that a replacement storm sewer system be installed with additional inlets on Sand Hill Road and Forest Avenue.

ST: By the time the runoff get to this intersection, it is already many inches deep, and covers the entire paved width of Sand Hill. The residents at this intersection have photos of this. More inlets at that point would have no effect on these dangers. Controls are needed far uphill of this intersection.

HRG Page iii-16: PROBLEM AREA NO. 6 – SPRING CREEK AND WEST MANSION ROAD. The estimated cost for the recommended system is \$2,325,000. This cost estimate does not include land acquisition costs.

ST: The problems and affected structures and areas cited all appear to be private property, as do the obstructions. The opinion of probable costs estimate this Area will take about 30% of the entire budgeted opinion, and land acquisition is also needed in addition. Would the taxpayers fund such remediations? If so, what might be the benefit to the taxpayers for said improvements? It is more advantageous to the citizens if Norfolk Southern and/or the Hershey Company alleviate any and all problems on their land, if said are leading to detrimental effects thereon.

#### HRG Page iii-19: PROBLEM AREA NO. 7 – PALMDALE PARK & ROUTE 422

ST: This former waterway is a FEMA delineated floodplain. As such, it is supposed to flood naturally. All normally inundated areas are recreational areas. What is the benefit to draining it faster, and might that not cause problems unnecessarily downstream?

HRG Page iii-22: PROBLEM AREA NO. 8 – EAST CHOCOLATE AVENUE. The estimated cost for the recommended system is \$27,540.

ST: Does this area flood historically? Does it pose potential for harm to SR0422 or adjoining property owners? If not, it should be moved down the list of priorities.

HRG Page iii-25: PROBLEM AREA NO. 9 – SUNSET DRIVE

ST: This former waterway is a FEMA delineated floodplain. As such, it is supposed to flood naturally. Is Sunset a Twp Rd? If not, then all normally inundated areas appear to be private property, developed within the floodway. Might it not be the owners' responsibility to alleviate any and all problems on their land, if said are leading to detrimental effects thereon.

ST: The water source (for Areas 7, 8 and 9) originates in Lebanon County. Might there may be state or federal assistance since this is issue transcends two counties? Might Palmyra's MS4 Permit require them to help with what comes from their municipal storm system.

HRG Page iii-34: PROBLEM AREA NO. 12 – WOOD ROAD POND

ST: There is at least one detention basin, at Derry Woods Rd and Bullfrog which fails regularly. The spillway overtops, the embankment at the outfall is eroded so badly you can see the outfall, which is badly rusted. Is there an effort to document failing existing structures like this and fix them - or have their owners fix them - before initiating our final design? That might lead to less public investment needed. HRG had previously told me that "The Township (outside of this study) is looking into that situation to ensure that the detention basin is functioning as designed."

ST: Much erosion occurs along the bike path northwest of Shank Park. Might a detention facility on the Park's property be used to alleviate what gets to the Pond and it's structures?

HRG Page iii-38-40: PROBLEM AREA NO. 13 – HERSHEY PARK DRIVE AND MAE/WALTON ROADS

ST: Might this have higher priority, as there is documentable destructive flooding at Mae/Walton and SR0039? Recall that the business where the current Pizza Hut is was nearly totaled a decade or so ago.

ST: Have we considered asking the The Trust to cooperatively allow some additional storage on their lands of the Hershey Center for Applied Research, prior to cloverleaf and lower legs of this system?

ST: There is much area for detention along Bullfrog Valley Run. I believe this land is Derry Right-of-Way, and recall that it may have been deeded fee-simple to the Township by one of the developers.

HRG Page iii-43: PROBLEM AREA NO. 14 – LUCY AVENUE

ST: There is an existing basin in the Cancer Society parking lot. The berm could be made higher, allowing for more detention prior to the problem area. Might a cooperative approach with the American Cancer Society, and possibly ARM Group's property behind (east of) the basin be desirable? It would lead to a potentially awkward ownership: there is existing private-property storage obligations in the basin, and Twp would be asking for overdetection, essentially of "public" runoff. But this could be handled to the advantage of all parties, I believe.

HRG Page iii-46: PROBLEM AREA NO. 15 – NORFOLK SOUTHERN RAILROAD NEAR SIPE AVENUE

ST: Does the railroad flood? Do existing structures flood? Would there be a benefit to spending over \$410,000 here? Might a detention facility work?

HRG Page iii-49: PROBLEM AREA NO. 16 – HIGHMEADOW CAMP PARKING LOT

ST: Does anything other than the private parking lot get flooded? Might the owner simply move their parking lot if it is a problem?

Other questions:

1) The basin at the Hershey Lodge, at SR0422 and University Drive, occasionally tops SR0422. Is there a need to look at that area?

2) Have any costs to alter, work around, replace, etc. existing utilities, curbing, roadways, etc. been factored into the cost estimates? There doesn't seem to be, and they will be very significant.

3) Are we exploring formation of a Stormwater Utility or Authority to fund these improvements? I recommend we at least look at it. Grant funding is scarce and comes in small increments. Pulling a bond for this work will be burdensome. There is a company called AMEC who has done much work in this area. I spoke to a person - I believe Marylou someone - from AMEC regarding this, she sounded like this might be worth exploring.

4) What is the status of updating our very outdated SWM Ordinance? I request that it not have to wait for the 167 Plan to be enacted, as these tend to drag out for many years.

5) As an example of an improvement to the SWM Ord: The Hotel project along East Chocolate which received zoning approvals will decrease imperv by just 1%. I anticipate LDP submittal to be devoid of any storm controls, and justification to be this removal of imperv coverage. The problem is that the soils underneath the newly proposed vegetated coverage will be long-compacted soils, with almost no infiltration capabilities. Remove "loophole" which allows minimal amt of imperv removal to exempt all SWM storage. Require BMP Manual redev criteria: "BMP 6.7.3: Soil Amendment & Restoration" to be applied to all existing impervious cover which is proposed to be counted as pervious. Further, all revegetated areas must be surveyed and documented as-built.

6) To our SLDO, we should add an As-built plan submittal, review and approval requirement, prior to release of financial security, to ensure all improvements are built correctly as planned/approved.